Single Copies 10¢
Subscription rate $3.50 per yr. in U.S.A. and Mexico (U.S. money)
$4 in Canada
$5 in foreign countries
Trade Mark reg. U.S. Pat. Off.
Members of Audit Bureau of Circulations and Associated Business Papers, Inc

NATIONAL PETROLEUM NEWS

Branch Offices:
LOS ANGELES
Petroleum Securities Building
TULSA
World Building
NEW YORK
342 Madison Avenue
HOUSTON
614 West Building
CHICAGO
35 Wacker Drive

Published by the National Petroleum Publishing Co., MAIN OFFICE · 1213 W. 3rd St., Cleveland, Ohio. Copyrighted 1927.

Vol. XIX Cleveland, Ohio, October 12, 1927 No. 41

Faster Driving of Motor Cars Develops New Lubrication Requirements

By Paul Truesdell
N. P. N. STAFF WRITER

DETROIT, Oct. 6

IT APPEARS that the refining industry in general, while it has been struggling with the problems of providing suitable motor fuels for the newer and better 1927 automobiles the manufacturers are giving us, has failed to recognize fully another factor of equal or almost equal importance—that is lubrication of the new cars.

This is established by interviews with outstanding automobile and oil company engineers who have made extensive tests of the new engines, using practically every oil offered for sale. These tests are said to have shown conclusively the following two facts:

1—High grade cars, designed to run at very high speeds, demand an oil of much higher flash, fire and viscosity than oils which satisfactorily lubricated the engines of 1925 and 1926 and earlier cars. This is strictly true, however, only of cars which are actually driven at high speeds for long distances. Cars used merely for town driving and always held below a maximum speed of 40 to 45 miles an hour can get along well on any oil offered by reputable dealers anywhere.

2—Cheaper cars which are not capable of sustained speeds of above 45 miles an hour, although their engines have been considerably improved in the late models, do not need any different oil than they have been using for the past two or three years.

Only relatively few refining companies have sensed this change in requirements for motor oils, which are the results of improvement in roads generally and of a change in the mental state of the average automobile driver, rather than of any change in the design of the cars.

It may not be generally appreciated in the oil industry, but it is thoroughly appreciated in the automobile industry, that the average speed made in long distance driving has almost doubled within two or three years. This is not because the cars of 1927 have twice the capacity for speed of those of 1924 or 1925, but because the drivers take advantage of good state roads to let their cars out for long stretches at a time.

The higher speed of engines, that is the greater number of revolutions per minute, does not of itself offer any new lubricating problems nor does the increasing complexity of traffic affect the situation. High and long sustained speed seems to be the only new factor affecting the lubricating situation and that seems to mean generally speeds above 45 miles an hour.

THE three properties upon which the lubricating engineers lay the most stress in considering oils for high speed cars are flash, fire and viscosity, flash and fire are important as an index of volatility of the oil, and viscosity, of course, measures the load sustaining value of the oil film or its ability to keep the metal surfaces apart, and the engineers are interested in viscosity chiefly at 210 degrees Fahr., not at 70 or 100 degrees Fahr.

For engines driven at high speed, the old light and medium oils with comparatively low flash and fire points and viscosity of 200 to 300 seconds at 100 degrees Fahr., are unsuitable, tests are said to have shown. There are many such oils still on the market. They tend to vaporize and thin out under the temperatures to which exposed in the engine, which results, first, in making it difficult or impossible to maintain an adequate oil film on the cylinder wall and, second, in reducing the quantity of oil in the crankcase rapidly, with the danger the crankcase may run dry in an unexpectedly short time and cause burning out of bearings.

An oil specification called A-75, indicated by General Motors for use under high speed conditions and, it is understood, approved by most if not all the leading automobile manufacturers has a flash of 440 degrees Fahr., fire of 505 degrees Fahr., and viscosity of 70 to 80 at 210 degrees Fahr., and a pour point of 40 degrees Fahr.

Some interesting facts on the present motor lubrication situation are brought out by Robert K. Floyd, of Detroit, for years an oil specialist and a specialist furthermore in lubrication as applied to automobile engines. Mr. Floyd is also an expert aviator and automobile driver.

Mr. Floyd says that tests have shown that the miles per gallon of service given by an oil increases with the increase in viscosity to 70 seconds at 210 degrees Fahr.

THE efficiency is practically level from that viscosity to 85 seconds when it begins to decline again. This fact applies to motors driven at speeds up to 65 m.p.h. An oil of high flash and fire test (containing few of the lighter ends) will evaporate more slowly from the cylinder walls, thereby maintaining a better film and rendering longer mileage.

If the viscosity of the oil is too

high, the pressure acting to hold the piston rings against the cylinder walls will not be sufficient to cause the rings to wipe off the oil. The rings will slide over the oil instead of wiping it off, resulting in oil pumping, smoking and so on. An oil as heavy as this will also be so viscous as to prevent good circulation to the bearings. It has been found, according to Mr. Floyd, that the pressure behind the ordinary piston ring must not be more than 1½ to 1¾ pounds if wearing of the cylinder walls is to be avoided.

No matter how carefully the car is designed and how well built, and how efficiently lubricated, there is no question, according to Mr. Floyd, that it is not going to stand up under the speeds at which it is habitually driven nowadays nearly as long as if driven at moderate speeds.

He cites his own experience to prove this. He is now driving a standard make of a so-called high priced car which is two years old and has turned up 26,000 miles. During the two years of service, Mr. Floyd has spent $600 in upkeep. This does not mean there was anything wrong with the car. The money simply went for repairs due to high speed; regrinding and replacing valves, relining brakes, renewing breaker points etc. Mr. Floyd drives long distances frequently at speeds of 50 to 65 miles an hour. He says that, if he drove always at moderate speed, he likely would have had much smaller bills for upkeep. This condition is not true of his car alone, but applies equally to any of the high grade cars that can be driven at high speeds for long distances, Mr. Floyd says.

If maintenance bills reach this figure when it is considered the car has the best of lubrication that an expert lubrication engineer can provide, it is easy to see what the upkeep bills might reach with such a car in the hands of an ignorant or heedless driver.

Notwithstanding the necessarily higher cost, the American motoring public is going to continue to drive fast and faster—as much faster as the power of the car and smoothness of the roads will allow. And if it does not have the right oil for its cars it is going to get into trouble, frequently serious trouble.

While the high speed cars are the only ones right now that require this special kind of lubrication, the ones in the next grade below, and even down to the cheapest, are crowding them hard.

Michigan already has abolished all state speed laws. What the car will do is the only speed limit. Speed laws are disregarded everywhere in all states except where villages and hamlets carry on an arresting business for revenue only.

The motorist, whatever his car, is "stepping on 'er".

Whenever there is a clear stretch ahead the driver generally has the accelerator button against the floorboard. Most any car can do 45 miles an hour for long distances and that brings them all up against the border line beyond which a heavier oil is needed.

Being alive to the situation, a number of refining companies have brought out new oils, even new types of oils, the past several months. Undoubtedly these new oils are in response to the demand for a new type of lubrication.

It is not safe to dismiss this situation with the snorting remark that we don't need to worry about the requirements of a few speed demons. Everybody, practically speaking, is a speed demon nowadays to the extent his car will let him be.

NOTHING serious has happened yet to automobile engines, despite the fact higher speeds of driving are common. There have been no storms of complaints of burned out bearings, no kicks even about excessive wear on engine parts, due to using the wrong kind of oil. But the automobile engineers are anxious. They cannot afford to have the motoring public get into trouble with their cars if they can help it. They have found out by exhaustive and expensive tests what can happen from using the wrong oil in a high speed car.

There are stories about tests General Motors engineers are running—driving a geared-up La Salle 100 miles an hour 24 hours a day, 7 days a week, at the proving grounds near Detroit. It is said that the oil best suited for this continued speed is a clear bright stock of 150 seconds viscosity at 210 degrees Fahr. The application of the ordinary medium or heavy oil to this kind of driving would result in a ruined motor. Oil temperatures rise to a high peak under such driving.

Another serious source of grief to the automobile and the oil company technologists as well as to the average motorist is the excessive wear that occurs in winter in the engine of a car that is driven short distances intermittently and is allowed to stand in the cold for long periods between the driving periods.

In such a car a light oil must be used, the technologists say, an oil of low pour test and comparatively low viscosity because conditions here are exactly the reverse of those prevailing in a fast-driven car. If a car is started cold, driven for a mile or two, allowed to stand in the cold, driven another mile or two or three, the engine never gets warm enough to thin out the oil sufficiently to cause it to flow freely.

If a heavy oil be used under such conditions the chances are that the engine runs much of the time with the cylinder walls bare of lubricant and the engine shows excessive wear. Tests have shown, it is stated, that 10,000 or 15,000 miles on a car used, say, by a doctor, who drives and halts for long periods alternately will show more wear on the cylinder walls and piston rings than a taxicab will show in 150,000 miles because the taxicab is almost constantly in operation, the engine practically never gets cool, let alone cold, and at the same time it is never driven at extremely high speeds which also cause excessive wear.

Maybe, in their eagerness to give the public what it wants and then keep the public from getting into trouble with it, the automobile engineers are somewhat exaggerating the bad effects that may follow the use of last year's oil in next year's car. But it would seem that the refiner can well give thought to what they say. Whether the ultimate motor oil will be made by some new system of distillation and manufacture generally, or from improvements of processes already in use, is not apparent now.

But there is no doubt that the refiners will make an oil that will satisfactorily meet the requirements of the new cars as they come out.

Index to Coming Meetings

California Natural Gasoline Association, Biltmore Hotel, Los Angeles, Oct. 15 and 16.

Petroleum Division, A. I. M. E., Texas Hotel, Fort Worth, Tex., Oct. 19, 20.

Virginia Independent Oil Men's Association, Monticello Hotel, Norfolk, Va., Oct. 20, 21.

Independent Oil Men of America, Congress Hotel, Chicago, Oct. 24, 25, 26.

Natural Gas and Petroleum Association of Canada, Prince Edward Hotel, Windsor, Ont., Oct. 28.

American Oil Men's Association, West Baden Springs Hotel, West Baden, Ind., Nov. 2, 3, 4.

Indiana Independent Petroleum Marketers Association, West Baden Springs Hotel, West Baden, Ind., Nov. 3.

American Petroleum Institute, Hotel Stevens, Chicago, Dec. 6, 7, 8.

Ohio Petroleum Marketers Association, Neil House, Columbus, O., Feb. 23, 24.

Hendricks Ranch Pool in West Texas Is Next on the Program

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, Oct. 7

NEXT after the Yates field, Pecos county, West Texas operators are faced with future large-scale developments in the Hendricks ranch area of Winkler county.

Lack of trunk pipeline outlets, an action of operators in limiting their production individually, have avoided down to the present the necessity for prorating measures similar to methods now functioning in the Yates shallow field.

How long the present Winkler county situation can continue without getting out of hand is a question; the field is in the hands of many operating interests and it has been proved for big production a distance of nearly four miles from north to south and about one and three quarters miles from east to west.

Ten producing wells in the Hendricks area, which are being allowed to make less than 10,000 barrels daily, serve only as outposts marking ground definitely proved by drilling. They fail to indicate field limits in any direction, except possibly to the west; but do provide sub-surface data suggesting the area of productive ground is to be at least double, and possibly treble, the area inside a line drawn on the map so as to encircle all currently producing wells.

It is estimated in conservative quarters that, if Hendricks field wells already drilled into the pay were opened up and allowed to produce to capacity, a flush yield could be obtained of 20,000 to 22,000 barrels. Estimates of possible flush on wells as yet uncompleted would be hazardous, but if the 23 wells with casing set at, or near, top of the lime were completed at an early date and good yields were obtained it is possible the initial production could be increased 65,000 to 70,000 barrels above the present potential flush.

Estimates of Hendricks field ultimate yields made by Humble Oil & Refining Co., and included in President Farish's letter of Aug. 25 on Pecos county proration (page 27, Aug. 31, 1927 issue of NATIONAL PETROLEUM NEWS), gave the Winkler county area 135,000,000 barrels as against the 255,000,000 barrels set up for the Yates structure.

Parenthetically, attention should be called here to the fact that the Yates and the Hendricks fields are the two in west Texas with relatively higher porosities in the lime pay than others previously developed.

Just as hydrostatic water pressure backs up the oil in the shallow Yates field under development at 1000-1200 feet it is believed a similar condition exists down-dip on the Hendricks structure, where production is found below 2800 feet. This is indicated by pressure said to be as high as 1500 pounds per square inch in individual producing wells. There have been no reports of water in the Hendricks field, however; and its appearance, when it does come, probably will be in edge wells far enough down the dip of the structure to prevent rapidly dangerous encroachment.

THE southernmost well in the field, the B-1 T. G. Hendricks of the Southern Crude Oil Purchasing Co., in sec. 4, block 5, has produced in excess of 5175 barrels every day since its completion on Sept. 5, last. It is the only well in the field that has not been pinched materially below open flow production capabilities. With the field averaging 8950 barrels from 9 wells, Oct. 1, it is apparent, therefore, that the 8 others were giving up average pinched down yields of roundly 470 barrels each.

The 10th well in the field has just been completed by Landreth Production Co. and Roxana Petroleum Corp., in the southwest corner of the northwest quarter of sec. 45, block 26, offsetting the Southern Crude's northern outpost of proved production, its No. 1-A-1, which Oct. 1 was averaging 987 barrels daily. The Landreth-Roxana well, which flowed 330 barrels the first 17 hours, in lime pay at 2860-2890 feet, is on one of the leases in which Landreth recently sold Roxana a half interest for $775,000 cash and $100,000 out of oil produced. All of Landreth's leaseholds in the Hendricks area were included in the Roxana deal.

WITH the exception of field storage, construction of which has been held to a minimum, there are only two outlets for crude from the Hendricks area. These are short pipelines of the Southern Crude Oil Purchasing Co., arm of the Pan American group, and the American Petroleum Co., affiliated with the J. S. Cullinan interests, which outlets extend in a general southerly direction to the Texas & Pacific railroad at Wickett and Pyote, respectively.

Southern Crude has been running oil for itself, the Gulf, the Pure and the Independent companies. Amer-

Test Wells with Casing Set in Hendricks Field

(On, or near, top of lime; not on production, Oct. 1, 1927)

Company	Location Wells	Number Well	Total Depth	Top Lime
Atlantic Oil Producing Co.	Sec. 34, Blk. 5	A-1	2490	2458
Cranfill-Reynolds	Sec. 28, Blk. 5	1	2514	2487
Gulf Producing Co.	Sec. 34, Blk. 5	3	2594	2533
Gulf Producing Co.	Sec. 34, Blk. 5	4	2658	2546
Gulf Producing Co.	Sec. 34, Blk. 5	5	2505	2443
Gulf Producing Co.	Sec. 34, Blk. 5	6	2556	2374
Gulf Producing Co.	Sec. 34, Blk. 5	7	2576	2476
Humble O & R Co.	Sec. 34, Blk. 5	1	2757	2324
Humble O & R Co.	Sec. 34, Blk. 5	2	2385	2225
Independent O & G Co.	Sec. 34, Blk. 5	A-1	2595	2575
Independent O & G Co.	Sec. 34, Blk. 5	A-2	2504	2502
Murchison-Marland	Sec. 35, Blk. 5	1	2655	2290
Pure Oil Co.	Sec. 41, Blk. 5	2	2680	2448
Pure Oil Co.	Sec. 34, Blk. 5	B-1	2385	2276
Roxana Petroleum Corp.	Sec. 29, Blk. 5	B-1	2560	Anhy.
Southern Crude	Sec. 4, Blk. 5	T-67-3A-1	2667	2638
Southern Crude	Sec. 33, Blk. 5	T-67-1C-3	2737	2390
Southern Crude	Sec. 33, Blk. 5	T-671-C-4	2740	2600
Southern Crude	Sec. 33, Blk. 5	T-67-1-F-1	2529	Anhy.
Southern Crude	Sec. 35, Blk. 5	T-68-3A-1	2313	2296
Southern Crude	Sec. 35, Blk. 5	T-89-A1	2450	2298
Southern Crude	Sec. 28, Blk. 5	T-88-1C-1	2429	2417
Texon Oil & Land Co.	Sec. 41, Blk. 15	1	2814	*

*Supplying gas to 35 boilers at 110 lbs. pressure at intake of line.

Hendricks Field Comparative Production Table

Company-Well	Section Block	Total Depth	Initial Production (Barrels)	Oct. 1, 1927 Pinched Production (Barrels)
Gulf Production Co.				
T. G. Hendricks 1	35-B5	2842	4400	830
Independent Oil & Gas Co.				
T. G. Hendricks 1	42-B5	3060*	125	....
Pure Oil Co.				
T. G. Hendricks 1	41-B5	2838	1054	939
Murchison et al.				
T. G. Hendricks 1	35-B5	2655	2400	795
Southern Crude Oil Purchasing Co.				
Hendricks 1 T-67	42-B5	3004	130**	295
Ida Hendricks A-1	44-B26	3077	1800	987
T. G. Hendricks B-1	4-B12	2912	5300	5177***
T. G. Hendricks C-1	33-B5	2983	1070	759
Landreth & Roxana				
Gresham-Hunter 1	45-B26	2890	460	(Not Comp.)

*—bottom of pay.

**—400 bbls., after deepening 28 feet.

***—Not pinched.

ican Petroleum Co. is buying oil from the Murchison-Cranfill interests, who have a well in the northwest corner of the southwest quarter of sec. 35, block B-5, which has been recently making 795 barrels daily pinched production. Southern Crude has an agreement to run one-quarter of the well's production, representing the 25 per cent yield of the property owned by Marland Oil Co. of Texas. Pipeline runs of Southern Crude have included about 900 barrels daily each from Gulf and Pure, under an agreement with them to handle such an amount. Hendricks field properties of Independent Oil & Gas Co. are to be operated hereafter by Southern Crude under a development contract.

Southern Crude has been shipping large quantities of Hendricks crude in tank cars to the Destrehan, La. refinery of the affiliated Mexican Petroleum Corp., but undoubtedly will eventually arrange for trunk pipeline facilities southwest to the Texas Gulf Coast, probably in the Corpus Christi district, via fields in the McCamey district of Crane-Upton counties.

Meantime, Southern Crude's steel storage in the Hendricks area consists of two tanks of 55,000 barrels capacity at Hardin station, in which there is 15,000 to 20,000 barrels of room; one "55", at Wickett, partly full; another "55" at Wickett, nearing completion; one "25" at Wickett under construction; one "20" at Wickett, partly full; and one "10" at Wicket, full.

American Petroleum Co., which pumped its first oil Sept. 18, last, has two tanks of 10,000 barrels capacity at its pumping station in sec. 36, block 5, and four "55s" under construction at its loading rack, one and a half miles east of Pyote; one of the 55s has been completed.

Gulf Production Co., which eventually will connect Hendricks field with its trunk pipeline east from Midland, about 50 miles away, has two 80,000 barrel tanks empty and ready to use in Sec. 34, Block 5, should present producing restraint get out of hand. Humble Pipeline Co., which plans to extend its west Texas gathering system approximately 55 miles from northeastern Crane county to the Winkler development area, is building four tanks of 64,000 barrels capacity in sec. 8, block 12. Roxana is grading base for a first 80,000 barrel tank in sec. 40, block 5.

ELDORADO, Ark., Oct. 11.—Five men were killed, and two pressure stills and the receiving house at the Lion Oil Refining Corp., plant here destroyed by an explosion and fire Sunday morning. An investigation to determine the cause of the explosion is being conducted. The plant was not totally disabled and repairs will be rushed, it was stated today. No estimate of the damage has been made as yet.

Program for I.O.M.A. Convention Fortells Novel Meeting

Staff Special
CHICAGO, Oct. 9

MEMBERS of the Independent Oil Men of America and oil men who are wanted as members will constitute the assembly when the I. O. M. A. holds its annual autumn convention at the Congress Hotel, Chicago, on Oct. 24, 25 and 26. Announcements of the meeting have been sent out to members only and each has been authorized to bring any jobber with him to the meeting whom he would like to have join.

On the first day of the meeting the members will be registered and issued badges upon presentation of their membership cards to the clerk at the desk. If one of these members brings a guest with him, who is a competitor he wishes to join the movement, the guest also is issued a badge at the personal request of the member. Members have been asked to notify the office, 624 South Michigan avenue, of the prospects they hope to bring. Basing their figures on these requests, L. V. Nicholas, president of the association says, the I. O. M. A. is arranging to take care of 2,000 guests all told, members, associate members and prospects.

The plan of the officers and directors in arranging the program has been to hold an unusual meeting. In the first place the gathering will not look like a trade convention. Their badges, already on hand, look more like fraternity pins than delegates' banners.

There will be no equipment exhibit. There will be no banquet. There will be no hired speakers. However, there will be a set program (which is a departure from the old convention plan of the late National Petroleum Marketers Association) with speakers who will talk for a short time each on subjects directly affecting the I. O. M. A. movement.

Each of the executives of the I. O. M. A. with a certain part of its work in charge will be on the program but that is not all. Speakers have been chosen who have something of business importance to tell the I. O. M. A.

The morning of the first day will be devoted to a directors meeting. The convention proper starts in the afternoon with E. H. Hilpp, chairman of the board of directors, offering greetings to the guests and members. Mr. Nicholas follows Colonel Hilpp with an address entitled, "The Spread Red Eagle, A Bird that Knows What it Wants and Goes After It."

"The Spread Eagle Brood, Birds to be Proud Of", is the subject of the next address by R. A. Overholzer, assistant to President Nicholas. After each address of the whole meeting there will be time for discussions and answering questions.

J. L. Marsh, Vahey Oil Co., Youngstown, O., heads the program for the second day. His subject is "Organized for Profit". He will be followed by C. Y. Hinchey, director of advertising for I. O. M. A. who will discuss "Equipment Hook-ups, a Coordinated Major Line." Mr. Marsh's profitable experience with the coordinated Independent movement is expected to carry weight with every jobber present.

"Red Hat Motor Oil, a $10,000,000 Asset", is the subject upon which T. A. Peck, director of the lubrication department of the association, will talk early in the afternoon of Oct. 25.

Instead of using up all his big fire for the beginning of the convention, Mr. Nicholas has reserved some of the most interesting matter for the last day. In the morning session W. G. Leamon, inventor of the "Stellarene" process of distillation, which product members of the I. O. M. A. are seriously considering marketing under the Red Eagle emblem, will speak to attending delegates on the subject, "'Stellarene'—An 'Ethyl' Gasoline Equivalent." Following Mr. Leamon, Roy Jones President of the Pan Handle Refining Co., Wichita Falls, Tex., will give a detailed analysis of the refiner's viewpoint under the subject, "The Independent Refiner in View—Why We Put the Spread Eagle on Our Tank Cars."

More Little River Failures

(By Telegraph)

TULSA, Oct. 10.—Two outside tests in the Little River field which would have effected extensions southwest are failures. These are Barnsdall Oil & Gas Co.'s No. 1 Davis, in southeast northwest of 2-7-6, which is now in the second Wilcox and shut down at 4435 feet with water in the hole. The other failure is an east offset to the Barnsdall well as is in the southwest of northeast of the same section. It is also in the second Wilcox and has a hole full of water. Production for the entire district for the 24 hours ended at 7 a.m. Oct. 10 was 436,000 barrels, a drop of nearly 9,000 barrels from the previous day. It is a natural drop and there is little prorating being done. Little River accounts for 40,000 barrels. The rest of the district in the past few days has fallen below 400,000 barrels.

Characteristics of Tomorrow's Gasoline Studied by Four-State Jobbers

By J. C. Chatfield
N. P. N. STAFF WRITER

KANSAS CITY, Oct. 6

INTENSE interest in the gasoline of tomorrow, a motor fuel which will operate high compression automobiles of the future, was shown by more than 500 midwestern jobbers at the second annual four-state convention which closed today. The meeting was attended by marketers from Kansas, Iowa, Nebraska and Missouri who packed the assembly room of the Kansas City Athletic club for each session.

Dr. M. R. Mandelbaum of the Gray Process Corp., asserted in his address on the gasoline of the future, that there will be an increasing demand for anti-knock fuels in the future of known rating so that the motorist may buy exactly the kind of fuel he needs for his car and pay a proper premium. Other predictions were that the art of cracking will undergo marked changes in the near future to produce gasolines of higher anti-knock ratings and that cracked gasoline will be sold more and more without blending with straight refinery gasoline.

"It would not be asserting too much to say that tomorrow's gasoline is here already, although those of us not yet accustomed to the new measuring rods can not recognize it," Dr. Mandelbaum said. "Gasoline has accumulated a set of what we now see to be false standards. Their eradication involves a careful campaign of re-education."

Illustrating his point Dr. Mandelbaum showed that the gravity specification grew up as a rough and ready index to volatility. "Differences in various crudes have shown gravity of gasoline to be meaningless," he said. "The end point of a gasoline on the A.S.T.M. distillation curve likewise means practically nothing. It is now thought that ease of starting and acceleration depends not so much on the volatility of the entire body of gasoline as on the presence in it of a comparatively small amount of low boiling point hydrocarbons."

THE theory that heavy ends are necessary for additional heat units was minimized by the speaker. He pointed out that the fuel is mixed with such a large proportion of air that calorific value may be disregarded.

"The really important characteristics of gasoline are bound up with the efficiency of the motor in which they are to be used," Dr. Mandelbaum said. "How the gasolines of the future will be rated, whether by the highest useful compression ratio, benzol equivalent or aniline number, is problematical. Very likely a satisfactory motor test will be developed and adopted as a standard.

"It is surely not too much to expect that in a few years we will see filling stations in which several types of gasoline are sold. The intelligent motorist will be able to drive up, ask for, and get a gasoline with a highest useful compression ratio of 6 or 5 or 4, whatever his needs will be. Due to the large number of cars with low compression ratio in operation today and the ever increasing life of such equipment it will be some time before all motorists will want to pay the additional price that will be deservedly exacted for the more efficient fuels.

"CRACKING, intelligently applied, will furnish much of the anti-knock motor fuel of tomorrow. It is now known that gasolines produced by vapor phase cracking are even more suitable from the anti-knock standpoint than those produced by the high pressure processes in the most common commercial use at present.

"Several large refining companies are carrying on extensive experiments with vapor phase cracking and it is likely that the near future will see considerable changes in the practical art. Some 10 or 12 years ago vapor phase cracking was tried but was abandoned on account of high costs.

"Other experiments of refiners on present commercial cracking processes are of equal interest with those on vapor phase cracking. It is indicated that slight modifications of cracking conditions in present equipment, particularly increases in cracking temperatures, result in gasolines which compare very favorably with vapor phase cracked products."

Dr. Mandelbaum warned that cracked gasolines should not be marketed without adequate treatment to eliminate gum forming compounds and stated that the treatment can be carried out without undue loss of valuable anti-knock properties. He mentioned vapor phase treatment without sulfuric acid as one low cost method. The jobbers were told that the doctor test is not essential and often not desirable but gave his opinion that minimum sulfur content requirements should not be raised and that color still will be a factor in selling gasoline both to jobbers and the public.

The various gasolines of the future, Dr. Mandelbaum predicted, will be straight cracked gasoline and straight run gasoline with various knock suppressors added such as benzol, aniline, highly volatile fractions and such substances as Ethyl compound.

Says Performance to be Chief Gasoline Test

JOBBERS will be able to buy whatever their gasoline lacks and put it in themselves within a short time, it was predicted at the meeting by Dr. G. G. Brown, professor of chemical engineering of the University of Michigan and head of the research division of the Association of Natural Gasoline Manufacturers. They will be able to buy volatility or chemical compounds to do the same piece of work.

Dr. Brown began his talk to the jobbers by taking the converse of the proposition laid down by the two Hudson Motor Car Co. representatives. He said that the gasoline dealer of the future must have a motor fuel that will work in every car and not depend on Hudson and Essex owners for business no matter how many cars that company may sell.

"Performance will be the standard by which gasoline is measured in the future," Dr. Brown predicted. "It will not matter whether it is sky blue, pink or green or what the stuff smells like providing it performs."

The doctor test came in for more criticism at the hands of Dr. Brown. He told of visiting a cleaning establishment where the operator was having trouble because his copper kettle was black although he was using a doctor sweet product. The kettle was getting the clothes black. Dr. Brown advised that the doctor test requirement be omitted and the cleaner has had no further difficulty.

The most important characteristics of gasoline as given by Dr. Brown are volatility for easy start-

ing and quick acceleration, ability to keep the car going smoothly without knocking and economy. Starting, he said, is the most important since it is a first impression.

Volatility of the first 5 to 20 per cent to distill over was shown to affect ease in starting and operation until the motor warms up. The temperature at which the first 50 per cent distills over was stated to be much more important than the end point.

Since easy acceleration was found to be dependent on the amount of gasoline vaporized in the manifold, motor car manufacturers have been putting heat on the manifold, he said. With no heat on the manifold when the engine is started an excessive choke has been necessary and crankcase dilution has been increased. When the engine is warmed up the hot manifold has given an increased tendency towards knocking.

Dr. Brown brought out that highly volatile gasoline is composed of smaller molecules than the heavier grades. He stated that these small molecules will not knock as much as the larger, heavier ones. Dr. Brown went even further than Dr. Mandelbaum in comparing the heating values of light and heavy gasolines. He said that the heating value per cubic foot of mixture in a motor manifold is greater with a more volatile fuel than with a heavier product.

Discuss Lubes, Sales Promotion, Advertising

CHARLES M. SUTHERLAND, secretary of the Nebraska association, presided at the opening session which was devoted to gasolines. The second meeting was under the direction of A. C. Carpenter of the Lesh Oil Co., Ottawa, Kan., president of the Kansas jobbers. The final business session following the Wednesday luncheon was presided over by A. L. Lommel of the Bartles Shepherd Oil Co., Waterloo, Ia., president of the Iowa jobbers. The convention closed with an entertainment featured by a dinner, boxing contests and vaudeville acts tendered the visitors by the Kansas City Oil Men's club.

C. O. Hoover, chief chemist of the Deepwater Oil Refineries, Inc., Houston, led a discussion of lubricants and lubrication Wednesday morning. He explained the process of refining lubricating oils and the working conditions to which they are subjected in a motor.

C. W. Giller of the Shelby Sales Book Co., Shelby, O., talked on sales promotion, urging jobbers to acquire a viewpoint as a starting point before trying to persuade prospective customers to that viewpoint.

Glenn Condon of the Skelly Oil Co., Tulsa, talked on advertising.

THE oil industry should not be called on to manufacture special fuels for motor cars of the future; on the contrary refiners should standardize motor fuels while motor car manufacturers build engines to burn the standard gasolines so that the largest possible proportion of every barrel of crude oil may be utilized as motor fuel was a doctrine preached to the jobbers by W. A. James, advertising manager, and J. E. McClarty, service manager, of the Hudson Motor Car Co.

An interesting history of the development of the automobile motor was given by Mr. McClarty in which he stated that the Hudson motor of 1915 had as high a compression ratio as modern high compression motors and developed 76 horse power. By 1918 the company was forced to lower the compression ratio and virtually the same motor would deliver only 60 horse power.

Both Hudson speakers pointed out that their company believes it has started in the right direction and gotten a big jump on competitors by its new motor design. It was stated that the company has been running Hudsons on kerosene as a publicity stunt in many cities to show that their high compression motor will run on low grade fuel without knocking.

It was predicted that the next war among motor car manufacturers will not be a price war but a war in advanced engine design.

Owing to market copy on California and Gulf Coastal refinery markets reaching the Cleveland office of National Petroleum News too late this week to include in the regular market section, the following prices are corrections over those published for Oct. 10 in the tables on pages 107 and 109.

Corrections

In Oct. 10 column of refinery market tables, these prices apply in California markets:

54-58 U. S. Motor gasoline....7.00-8 00
58-61 U. S. Motor gasoline....8.00-9.00

These prices apply in Gulf Coastal markets:

300 Vis. #3 color unfiltered pale oil 10 00-11.00
500 " #3½ " " " " 12.00-12.50
750 " #4 " " " " 14.50-15.00
500 " #6 color red oil 10.50-11.00
750 " #6 " " " 13.00-13.50
Gas oil 4.25-4.50

Price of N. Louisiana 58-60 U. S. Motor gasoline on Oct. 10 should be 6.50 to 6.625 cents, instead of 6.625 cents flat.

Also, in Pacific export markets on page 113, prices have been omitted in column dated Oct. 10. All prices on Oct. 10 were the same as those on Oct. 3, except 14-18 fuel oil which is $0.85 to $1.

California Tank Wagon Up 1 Cent for Spot Sales

SAN FRANCISCO, Oct. 11.—On Oct. 1 Standard Oil Co. of California advanced tank wagon prices of gasoline 1 cent throughout its territory for spot sales not covered by contracts, establishing a 3 cent differential instead of 4 cents.

A very large portion of tank wagon deliveries are under existing contracts carrying the tank wagon prices published in the tank wagon table of this issue, page 111.

New customers, signing contracts and selling only one brand of gasoline, are given prices published in that tank wagon table.

This meets a situation where certain stations were selling several brands of gasoline and giving premiums instead of cutting the price. The new price affects very few stations as most of the sales of the major companies are under contract calling for 4 cent profit per gallon, and in a few instances, 5 and 6 cents, these few instances harking back to the price war last spring when these contracts were made.

Major companies have held their asking price for fuel oil for export at 85 cents and upward.

Gasoline prices still hold around 6 cents with reports that some material could be had a little lower for export, especially to the East Coast. Tanker rates are holding around 65 cents on gasoline, to 70 and 75 cents on fuel oil.

Demand appears to be better for 27 plus, Diesel oil, with the price in most instances advancing about 5 cents. This applies to tank car movement, rather than to export sales.

There is no change in kerosene prices and natural gasolines are about holding their own at unchanged prices.

DENVER, Oct. 11.—On Oct. 10 service station price of gasoline was reduced by the Continental Oil Co. 1 cent at Pueblo, to 17 cents, including 3 cent state tax. Tank wagon remains unchanged at 17 cents.

TULSA, Oct. 11.—On Oct. 10 Magnolia Petroleum Co. reduced service station prices of gasoline 2 cents, at Tulsa, to 16 cents, including 3 cent state tax. Tank wagon price is unchanged at 15 cents.

Tax Collectors Ask Oil Companies Into Their Conferences

By Roger B. Stafford
N. P. N. STAFF WRITER

COLUMBUS, O., Oct. 6

THE North American Gasoline Tax Conference, which convened here this week, invited the oil industry to participate in its efforts to obtain uniform gasoline tax laws and methods of collection. Several large companies have already availed themselves of the opportunity to become associate members of the conference. While they will not be entitled to a vote in the proceedings, their delegates will sit with the conference committees as advisory members and join in the discussions and debates.

Co-operation with the oil industry seemed to be the keynote of this second annual conference although some of the recommendations adopted will find strong opposition in the oil industry and even among members of the conference who are guided by present day public opinion in their home states.

The report of the committee on inspection, which was adopted without dissent at a short curtain ringing session after the annual dinner, will find the greatest opposition in the oil industry of any of the proposals which the conference adopted. The report of this committee follows:

"1. That the work of inspection is necessary and advisable. We recommend that all states have inspection laws and that they be as near uniform as is possible.

"2. Specification. We recommend that all states and provinces provide a specification for gasoline. That said specifications should be made to conform to those issued from time to time by the U. S. Department of Commerce, Bureau of Mines, as near as local conditions will warrant.

"3. We recommend:

(a) That legislation be passed giving oil inspection departments of the different states and provinces power to make safety regulations with reference to the handling of gasoline and kerosene.

(b) That measuring devices be placed under the supervision of the oil inspection department.

(c) All tests made by the oil inspection department should be made under conditions and with apparatus approved by the U. S. Bureau of Mines.

"4. We recommend that stringent legislation be passed by each state and province preventing the substitution and misbranding of lubricating oils and that the oil inspection department be authorized to prosecute such offenders."

After the conference one oil man summarized objections to these recommendations substantially as follows:

1. Oil inspection has been dropped by some states and thrown out of others. It still hangs on in a score or so of states, the remnant of days when gasoline was a by-product and the kerosene cut from the crude might have been started too early.

2. Competition for trade and design of new automobile engines make state regulation of gasoline specifications unnecessary.

3a. Adequate safety regulations for handling of gasoline and kerosene are now being made by state and local fire authorities with the co-operation of the National Fire Protection Association.

3b. Weights and measures departments seem the logical places for the supervision of oil and gasoline measuring devices; the present weights and measures supervisors are doing a pretty thorough job in a line that most of them have become familiar with. To change administrators would be folly.

3c. All tests are being made after methods adopted by the American Society for Testing Materials and the Federal Specifications Board which the conference has confused with the Bureau of Mines.

4. Laws cannot prevent substitution and misbranding of lubricating oils. Most states now have laws that prohibit substitution or misbranding of any commodity, which seem adequately to cover lubricating oils.

Two questions before the conference brought heated debates. One question was that of exemptions and refunds on gasoline not used on the public highways. The other was an amendment to the conference by-laws which permitted acceptance of oil industry representatives as associate members.

T. J. Cunningham, state oil inspector of Wisconsin, was the only person who voiced vehemence against admission of the oil men. "We must keep this association pure," he shouted and charged that the conference was being dominated by the oil industry. His charges that the chastity of the conference was endangered and the motives of the oil industry were sinister, were challenged by F. G. Driscoll, New York, attorney for the Sinclair Refining Co., who explained that the oil attorneys and tax experts were present only to learn and if possible to help.

G. A. Youngquist, assistant attorney general of Minnesota, and John S. Edwards, member of the Ohio tax commission, upheld the right of users of gasoline for purposes other than fuel for motor vehicles to be exempted from payment of a tax on it or to get refunds of taxes. Mr. McAtee led the opposition which, it developed, was the majority. Even those who favored refunds and exemptions admitted they formed the chief worry of tax collectors, but it was contended that gasoline used in power boats, airplanes, on railroads, in farm tractors, and in the industrial arts should not be forced to pay what is primarily a road tax although in some states it is called an occupation tax, that is, the tax is a tax on the right of an oil company or person to sell gasoline. Occupation taxes are not permitted by some states. The report opposing exemptions and refunds was adopted.

Tax laws will be studied and it is expected a draft of a uniform law will be presented to the third annual conference in Memphis, Tenn., sometime next fall by a committee consisting of Edward Martin, auditor general of Pennsylvania; George M. Napier, attorney general of Georgia; Mr. Youngquist; Frank E. Packard, general attorney of the Standard Oil Co. of Indiana; James J. Cosgrove, attorney for The Texas Co., New York, and W. J. Guthrie, secretary, Gulf Oil Corp., Pittsburgh.

A uniform tax law was suggested by Mr. Packard in a paper entitled, "Trend of Gasoline Tax Legislation—Views of the Oil Industry," which he read before the conference. Such a law was recommended in the report of the conference committee on administration and adopted. This committee also recommended the cultivation of a "friendly spirit of co-operation" with the oil companies with whom the tax collectors deal directly, simplified forms for the reporting of tax matters, study of the question of allowances for losses and shrinkage, and the posting of a bond to secure payment of taxes or "provision . . . for the immediate seizure of the property of a delinquent tax payer (gasoline distributor)." The

Organized Oil Inspection Fighting to Come Back

WHAT a marvelous transformation has come about in the status of the state oil inspectors and their departments. A few years ago kicked out of some states entirely, hanging on in others by the fraying thread of only kerosene inspection, what a metamorphism now, with these state inspectors assuming almost the dignity of a profession, holding a convention as professional organizations are wont to do, and shouting that they must be kept pure from the taint of commercialism through the presence of men connected with oil companies.

The state gasoline taxes have brought this about. They have revived what was a fast disappearing business—oil inspection—and put it on its feet stronger than ever. There was little nourishment in fees from inspecting cars of kerosene, especially when the states were inclined to reduce the fees and cut the numbers of deputy collectors.

But if inspection can be fastened on gasoline, in connection with collection of the tax, if supervision of regulations for safe handling of this product can be gathered to the inspection departments, and also testing of measuring devices, and the power to determine what is a case of substitution or misbranding of lubricating oil, what an army of jobs can be created to be filled through patronage, and what new channels for building up state fee systems.

Yet this is what the state inspectors and gas tax collectors—one and the same official in some states, and closely allied in others—openly propose in a platform adopted at the meeting of the North American Gasoline Tax Conference in Columbus last week. This is what they will work for in their various states and, funniest thing of all, they will ask the co-operation of the oil companies in helping to bring their hopes to pass.

Analyze their various proposals and you cannot find one the carrying out of which will help the motorist secure a better grade of gasoline or lubricating oil. They recommend state inspection of gasoline, in spite of the fact the government reports the quality of gasoline has been improving past years without inspection. What state with a gasoline inspection law now has better gasoline than states without?

The inspectors want supervision of measuring devices placed in their hands. That duty rests now with local agents who function, or can if they believe necessity exists. They want the right to prescribe conditions under which gasoline shall be stored. State and local fire authorities take care of this, seemingly better than could deputy oil inspectors.

In short, the move of the state inspectors seems to be an effort to police the oil industry from the manufacture of products at the refinery to their final distribution to the consumer. We do not believe the oil industry needs that supervision any more than any other industry, but we do believe the public will repudiate this organized effort to put state oil inspection back many times stronger than it ever was in the past.—V. B. G.

last mentioned recommendation means making gasoline taxes a first lien on the property of a gasoline distributor. All these recommendations were adopted.

It seemed to be the consensus of opinion that only the rate of the tax should not be covered in a model law; the rate would be left to the individual states which should set the figure to cover its needs. That gasoline tax receipts should be used exclusively for the construction and maintenance of public highways and bridges, was the recommendation of two committees. One also recommended their use for the retirement of highway and bridge bonds but also suggested that states should adopt a policy of pay-as-you-go in highway construction to curb extravagance. The conference also adopted a recommendation that the bulk of highway funds should be raised by a tax on gasoline rather than through automobile licensing fees.

Cyrus Gocher, director of commerce of Ohio, welcomed the tax men in behalf of Gov. Vic Donahey. Solomon Levitan, state treasurer of Wisconsin, responding urged more economy in administering the affairs of government. James Duce, state inspector of oils of Colorado, spoke on "Inspection—Its Critics," and E. D. Graham, state chemist of Oklahoma, on "The Distillation Board." A review of gasoline tax legislation was given by Mr. Martin, who warned that states should not levy enough to raise all the money desired. He said gasoline taxes now average 20 per cent of the retail price of the commodity and if the tax is made too high the returns will diminish. Mr. Duce commented that the oil industry was being "taxed to death."

A paper on "Gasoline Tax in Canada" was read by W. H. Brown, gasoline tax accountant of Ontario. He said gasoline distributors in Canada are allowed 2½ per cent of their collection to compensate them for their work. Gasoline consumption in Canada last year totaled 356,000,000 gallons, he said.

Mr. McAtee was re-elected president. A. N. Bobbitt, gasoline tax collector of Indiana, was elected secretary; Mrs. Henrietta W. Kniest, secretary to Mr. McAtee, treasurer, and Mr. Napier, counsel. Regional vice-presidents elected are: New England—W. Wheaton Tillinghast, Rhode Island; Eastern—Edward Martin, Pennsylvania; Southern—J. Fraser Lyon, South Carolina; Central—H. C. Reed, Ohio; Northern—Solomon Levitan, Wisconsin; Southwestern—W. J. Armstrong, Oklahoma; Mountain—James Duce, Colorado; Pacific—H. E. Crockett, Utah; Canadian—W. H. Brown, Ontario, and Mexican, Senor Torrez.

Aside from state officers, those attending the conference were:

Frank E. Packard, general attorney, Standard Oil Co. of Indiana, Chicago; F. G. Driscoll, attorney, Sinclair Refining Co., New York; A. Merle Hooper, sales manager, wholesale division, Standard Oil Co. of Ohio, Cleveland; Trell W. Yocum, American Petroleum Institute, New York; V. H. Crandall, manager, Sinclair Refining Co., Detroit; P. W. Zumbrook, sales representative, Sinclair Refining Co., Columbus; James J. Cosgrove, attorney, The Texas Co., New York; M. E. Griffith, Western Petroleum Refiners Association, Tulsa; W. J. Schafer, Roxana Petroleum Corp., Columbus; S. S. Kalisher, tax consultant, Atlantic Refining Co., Philadelphia; Thomas Midgely, Jr., General Motors Corp., Dayton, O., and A. E. Mittnacht, secretary, Ethyl Gasoline Corp., New York.

Mr. Midgely spoke about the development of ethyl gasoline at the conference's annual dinner.

Operator Killed in Airplane Accident

HOUSTON, Tex., Oct. 9.—Funeral services were held Sunday for Henry Sharp, formerly vice president of the Mexican Sinclair companies at Tampico, who died Saturday of injuries received in the forced landing of an airplane in which he was a passenger near Caldwell, Texas. Sharp had been an individual oil operator at Houston, the last three years.

Sinclair Loses Teapot Dome Appeal; Lease Ordered Cancelled

WASHINGTON, Oct. 10

THE United States Supreme Court today ordered returned to the government the Teapot Dome naval petroleum reserve in Wyoming. Thus ends the long series of civil litigation in connection with the leasing of Teapot Dome reserve to Harry F. Sinclair's Mammoth Oil Co. and the Elk Hills reserve in California to Edward L. Doheny's Pan American Petroleum Co. of California. The Elk Hills reserve lease also was cancelled by the Supreme Court last winter.

The decision of the court in the Teapot Dome case was unanimous. In the opinion which was delivered by Associate Justice Pierce Butler it was said the lease was obtained "fradulently by means of a collusion and conspiracy" between Sinclair and Albert B. Fall, secretary of the interior at the time the leases were made in 1922. Sinclair and Fall go on trial Oct. 17 in the Supreme Court of the District of Columbia for alleged conspiracy to defraud the government in the granting of the lease of Teapot Dome to Sinclair's company for development.

The court did not say whether Fall was bribed by the $70,000 Liberty bonds he received from Sinclair or the Continental Trading Co., in which was interested Sinclair, Col. Robert W. Stewart, chairman, Standard Oil Co. of Indiana; H. K. Blackmer, president, Midwest Refining Co., a Standard of Indiana subsidiary; James E. O'Neil, president, Prairie Oil & Gas Co., and Henry S. Osler, a Canadian. None of these men has ever testified how the Liberty bonds, which were known to have been in the Continental company's possession, came into Fall's possession. Blackmer and O'Neil are now fugitives from this country. Col. Stewart has been subpoenaed as a witness in the Fall-Sinclair trial.

Throughout the opinion Fall was condemned severely. The court at one point said: "It requires no discussion to make it plain that the facts and circumstances . . . require a finding that, pending the making of the lease and agreement, Fall and Sinclair, contrary to the government's policy for the conservation of oil reserves for the navy and in disregard of law, conspired to procure for the Mammoth company all the products for construction work, fuel oil, etc.; that Fall so favored Sinclair in the making of the lease and agreement that it was not possible for him loyally and faithfully to serve the interests of the United States or impartially to consider the applications of others for leases in the reserve, and that the lease and agreement were made fraudulently by means of collusion and conspiracy between them."

Concerning a payment of $25,000 in Liberty bonds by Sinclair to Fall after Fall left the Harding cabinet in March, 1923, the court said: "Coming so soon after the supplemental agreement made to perfect and carry out the scheme, it strengthens and confirms the inference that Fall had been willing to conspire to defraud the United States; and, taken in connection with other circumstances disclosed, it is persuasive evidence of such a conspiracy between him and Sinclair."

The lease of Teapot Dome was granted the Mammoth, a company Sinclair organized especially to conduct the Teapot operations, on April 7, 1922. A supplemental agreement was signed Feb. 9, 1923, or less than four weeks before Fall was to leave the Harding cabinet.

At the instigation of U. S. Senator Walsh of Montana, an investigation of the Teapot Dome leasing was begun in the senate early in 1923. Later it was decided to bring suit for the cancellation of the leases and two special government counsel were appointed by the president—former Senator Atlee Pomerene of Cleveland and Owen J. Roberts of Philadelphia.

The case was heard early in 1925 in the U. S. District Court at Cheyenne, Wyo., before Judge T. Blake Kennedy, who decided in favor of the Mammoth and Sinclair. The government appealed and the U. S. Circuit Court of Appeals reversed the district court in a decision handed down Sept. 28, 1926, by Judge William S. Kenyon at St. Louis. Sinclair appealed and the case was argued before the Supreme Court last December while Fall and Doheny were on trial for alleged conspiracy in connection with the Elk Hills lease.

The Continental was a Canadian corporation of which Osler was the nominal president. It contracted to buy 33,333,333 barrels of Mexia, Texas, crude from the late Col. A. E. Humphreys. It later developed that the same day the purchase contract was closed, the Continental contracted to sell the oil at an advance of 25 cents a barrel to the Prairie Oil & Gas Co., of which O'Neil then was president, and to the Sinclair Crude Oil Purchasing Co., of which Standard of Indiana, headed by Col. Stewart, and Sinclair Consolidated Oil Corp., which Sinclair headed were joint owners. Profits from this transaction were invested in part in Liberty bonds, $70,000 of which reached Fall.

The Mammoth which took over the Teapot Dome lease, had two classes of stock, a small voting class which was held by Sinclair and interests close to him, and a large volume of non-voting stock much of which was offered the public at $42 a share. The public offering was directed by Jesse L. Livermore, famed Wall Street operator. Last year some of the Mammoth stock was sold for a few cents a share. That is the last sale, details of which became public.

The Teapot Dome contract called for the building of a pipe line from Wyoming to a point near Kansas City where it joined an existing line of the Sinclair Pipe Line Co., which also is owned jointly by Sinclair Consolidated and the Standard of Indiana. Although the line was not required until a certain volume of production was attained, it was put in almost immediately.

At the time the lease was granted to Sinclair it was estimated that Teapot contained about 150,000,000 barrels of crude. Drilling quickly upset this estimate and it developed that, instead of being advantageous to Sinclair, the contract really was advantageous to the government in view of tankage and other fuel oil handling equipment the Mammoth was to install at seaboard points for the navy. Tankage already built at Portsmouth, N. H., and improvements installed at Teapot Dome now pass to the government under the Supreme Court's decision. Value of these improvements is estimated at $5,200,000. Sinclair's only avenue of redress for this expenditure is by act of Congress. Property that passed to the government under the court's Elk Hills decision, is estimated at $13,000,000.

Sinclair recently was fined $500 and sentenced to three months imprisonment for alleged contempt of the U. S. senate because he failed to answer certain questions at the senate inquiry into the Teapot leasing. He has appealed this case from the district court.

Brown to Test Gasoline At West Baden Meet

Staff Special

TULSA, Oct. 8.—Dr. G. G. Brown, head of the research department of the Association of Natural Gasoline Manufacturers, will conduct a series of tests of motor fuels at the fall meeting of the American Oil Men's Association at West Baden, Ind., Nov. 2, 3 and 4. Announcement of the association's decision to send Dr. Brown to the jobbers' meeting was made today by A. V. Bourque, secretary.

With the aid of two or three assistants from his laboratories Dr. Brown will make tests of anti-knock properties and the volatility of any samples of gasoline brought to the meeting by jobbers. A written report will be made to the jobber submitting the sample.

Five Tips on Handling Woman Customer, Told by a Woman Operator

1.—MAKE the station easy of access and pumps and air standards easy to reach.

2.—ENCOURAGE her to boss the greasing job herself. She'll believe it's done better.

3.—WAIT on her yourself, if you're around the station. Don't let one of the attendants do it.

4.—IF you are busy with another car, notice her when she drives in. Don't have her wait without letting her know that you know she's there.

5.—KEEP the rest rooms, and in fact, the whole station CLEAN.

By N. M. Mainpa
N. P. N. STAFF WRITER

CLEVELAND, O., Oct. 8. HOW to get the woman driver to your station and how to keep her coming are questions to which oil men in charge of station business are giving attention today.

The woman's viewpoint of a station, her impressions of it, its employes and its services, may be altogether different from that of a man. What will impress her most may not even be noticed by a man.

For example, a woman, first of all, will keep on the lookout for a station that is easy to drive into. She will inevitably notice how clean a station is. She will let her first impression of appearances remain and will not readily forgive the sin of untidiness.

Once in the station she will be quick to observe how attendants treat her. She will be quick to resent any lack of deference on their part. She will appreciate immediate recognition by attendants that she has driven in. While the average woman will not expect the attendant to rush to her car when he is busy with another, it will please her to know that he noticed her. A greeting or any evidence on his part that he saw her, will give her the idea that she'll get service at the earliest possible moment.

It will also impress her if the station manager, or the "boss"—should he happen to be around—wait on her himself, rather than one of the attendants. This gives her the idea that she is being singled out for a little extra attention and, of course, she will be pleased.

The gospel of cleanliness in the rest rooms particularly has been expounded for so long and so often that it should hardly need repeating here. But the impression that untidy rest rooms leave with women patrons cannot be correctly understood by men operators, or their stations would not be as remiss in this regard as they very frequently are.

A good illustration of the appeal of tidiness to women is show in the case of one who went on an auto trip on a recent holiday. She always buys only a certain oil company's gasoline. While driving through a large city, her gasoline supply was diminishing, and for fear she couldn't reach a station of her pet oil company, she stopped at another company's station. The friends she had with her in the car began kidding her about purchasing another brand of gasoline.

"Well, that station was CLEAN, anyway!" was her clinching argument, offsetting any point of superiority in product.

A few observations of a woman service station operator, as to what appeals most to the woman motorist, are told in this story.

This woman operator has considered easy accessibility and cleanliness at her stations as factors of greatest importance to the woman driver. This belief she bases on what the women have told her themselves and what she observes from their continued patronage at her stations.

She is Mrs. Daisy M. Woodward, owner and operator of the Woodward Oil Co. of Cleveland. When Mrs. Woodward began thinking about building her new station at W. 110th St. and Baltic Rd. here, her first consideration was wide, gently-curving drive-ways. Now that the station is completed she listens to remarks like this from women customers: "My, but your station is easy to get into. I like to drive there just because of those easy drives."

Some women tell her they like to come to her stations because they find them so uniformly clean.

"Oh, yes, I find that cleanliness appeals to every woman," Mrs. Woodward said. "That is why I insist on my stations and rest rooms always being kept tidy."

Because she secured at least one new customer recently through a woman driver who had the opportunity of bossing the greasing job on her car, Mrs. Woodward is convinced that the thing to do is to let the customer have a say-so in the way she wants her car greased.

Some four years ago Mrs. Woodward was conducting a tea room. That was not enough to her liking—it was monotonous, it lacked fascination. She wanted to begin in a business in which her son, Leighton, now out of military school, could find a suitable profession.

So, in January, 1924, she hustled around and installed a ready-made steel service station at the corner of Detroit Ave. and W. 110th St.

She did not start in any spectacular fashion. No full page newspaper advertisements heralded the opening, nor were any bands employed to toot the tidings about town.

Mrs. Woodward admits herself that curiosity on the part of many motorists who had heard about the station brought them there. They wanted to see what a woman who runs a filling station looks like and how she would handle the business.

Like any other woman, she had to "do her stuff" while these early customers were coming. She was always on the job to greet them with a smile. She inquired about the sick child at home as if the health of that child were of utmost concern to her. With just as much interest she inquired about the water for the radiator, or oil for the transmission. She wanted customers to feel that she was as much interested in them personally, as she was in their cars and in the products she was selling them.

THESE same customers, many of them, are still driving to her station. Some of them drive way out of their way to get there, several even coming from Rocky River and Lakewood, two of this city's west side suburbs.

"It must be that they appreciate the personal interest I take in them," Mrs. Woodward said. "That friendly feeling I can transmit to the patron is not always possible in a large organized oil company, where station attendants may change frequently.

"And that is another point. The motorist gets accustomed to the same attendant waiting on him. The customer trusts him and begins to believe that only he knows just how

A bid for women drivers' business has been made with spacious grounds and driveways at this station of the Woodward Oil Co., Cleveland, O.

Of unusual attractiveness is this station of red tumbler brick with pillars to match. This brick is regular paving brick with corners rounded off. The station grounds include 23,000 square feet, practically all of it given over to driveways. A water hose for radiators is installed at each canopy pillar

Here is Mrs. Daisy M. Woodward who keeps the woman driver in mind when she builds a service station. Mrs. Woodward owns and operates the Woodward Oil Co., Cleveland

to handle his requirements.

"That works on the same principle as me going to my favorite store or shop for a hat. I will ask for a certain clerk who has established herself in my estimation as the only one who knows just what I want—on whose judgment I can rely. I will even wait around for her services if she is busy with another customer, rather than have some one else wait on me.

"I believe it is because my oil customers know that I like to do things for them, that they pass many other stations along the way to stop at mine."

Of course, Mrs. Woodward does not actually wait on customers any more, but she did when she first started in the business. She does, however, stay on the job all day and makes it a point to perform any service possible for the motorist whenever she has the opportunity.

Today Mrs. Woodward is completing her own idea of a service station. It is on Baltic Rd. and W. 110th St., just a block from the old station. Its striking appearance is due to her choice of brick, and to the odd-shaped pillars she has placed about the station grounds.

Mrs. Woodward has made a departure in the design of pillars which guard the four approaches to the station. Contrary to the advice of friends to stick to the usual round or square pillars, she was determined to have something different.

With woman's tenacity she clung to her original idea. The result is that the pillars are not only one of the distinctive features of the station, but have attracted so much attention from the public that many motorists have driven around to see them.

The pillars resemble nothing so much as huge pineapples. They are cone-shaped, or as much cone-shaped as a pineapple dares to be, of red tumbler brick to match the station. They are capped with white cone-shaped globes trimmed in red. The rounded brick used also in the station helps much to give the "pineapple" effect.

This resemblance to the well-known Hawaiian fruit has been mentioned to Mrs. Woodward by several motorists, she said, some of whom now designate the pillars merely as "pineapples."

The new station is made of red tumbler brick joined with black mortar. The brick is unusual in shape and uncommon in use, as it is not sold for general use. Leighton Woodward describes it as regular paving brick with the corners rounded off through a process by which paving brick is tested for durability.

The brick is placed into a drum with shot and whirled about until the corners are rounded off. When the weight of the brick decreases a certain percentage, perhaps 20 or 23 percent, then the test for durability is finished, and the corners have been worn down to a neat curve.

Mrs. Woodward got the idea of using such brick from seeing it on the lawn of a house in which she once lived. She had always wanted a bungalow built of it, she said, but the nearest she has come to the bungalow so far is the new filling station.

The brick proved so attractive that many motorists have driven to the station to inquire from Mrs. Woodward where it may be purchased. One customer wanted to use it in build-

ing a fire place. Some visitors carried samples of it away so that hardly enough was left to complete the station, Leighton Woodward said.

The new station has canopies front and rear. Eight Erie meter system gasoline outlets have been placed at the pillars of the canopies and there is a water hose at each pillar.

The floor of the station is red cement in keeping with the predominating colors of red and black. Walls will be painted tan to match the oil containers in the station.

Plenty of illumination is provided at night. There are 42 lights in all, and Mrs. Woodward plans later to install flood-lights in a large tree on the station grounds. There are 10 lights around each canopy, three on either side of the station, five high pole lights at the back of the lot, two flood-lights for the rotary lifts, and one on each of the seven "pineapples."

The station is on a corner lot which has over 23,000 square feet of space. It occupies 185 feet on Baltic Rd. and 125 feet on W. 110th St. Two rotary lifts have been installed for the greasing and oiling of cars. Mrs. Woodward expects to install three more, and may add car washing facilities later.

The lifts are at the left of the station lot and will be under cover. The building which will house the lifts will also house the air compressor, grease and oil drums, and equipment used at the station.

Particular care was taken by Mrs. Woodward in designing the drive-ways to make them spacious and easy to turn into. Knowing from her own experience that women especially dislike to drive into a station where approaches are abrupt and require much turning, she had the drives made wide, gently-curving and easy to turn into.

There are three drive-ways on the Baltic Rd. side, each 25 feet wide. The one approach on the W. 110th St. side is 30 to 35 feet wide. There is plenty of room on the lot for several cars to drive in at once without congestion nor the fear of not being able to get out conveniently.

Rotary lifts have been installed, not only because they are the latest word in greasing and oiling equipment, but because it is possible for the customer to see just how the work is being done. The lifts also give the customer opportunity to boss the job if he likes, which, Mrs. Woodward says. many of them like to do.

One woman driver came into the station recently to have her car greased. While it was on the lift, she watched the Alemite trained man do the work while she bossed the job. The man did the work just as she directed and she went away so pleased with the greasing job that she told another woman driver about it. The next day found this other woman driver at the lifts having her car greased.

Other equipment features at the station include the latest type of air towers, placed in the center of the station with plenty of room for cars to drive up to them from all sides. The station has four large windows, plus door windows and a smaller window in the ladies' and men's rest rooms. The windows are of Spanish design, arched at the top. Door windows harmonize with the others so that, when doors are closed, the appearance of three windows at the front and back is created.

The two stations have a total storage capacity of 51,000 gallons. There are 16,000 gallons at the Baltic Rd. station which is on a siding of the Nickel Plate railroad. There are two 12,500 gallon underground tanks at the Detroit Ave. station into which gasoline is unloaded by gravity from the tank car. Two 1,000 gallon tanks are buried on the station ground, from which gasoline is sold to the motorist.

A.P.I. Committee Urges Creation Of Two Technical Divisions

Staff Special

CLEVELAND Oct. 10.

RECOMMENDATION that two technical divisions be organized within the American Petroleum Institute at once, is contained in a special report of the Committee on Technical Relationships which was appointed at the Tulsa convention of the institute last December.

The two divisions to hear and discuss technical matters are refinery technology and production engineering. Adequate facilities for the presentation, discussion and publication of technical and scientific matters are lacking for other subjects in the petroleum industry, the committee points out, but the need for the setting up of forums for them is not yet urgent.

In addition to the two for which immediate creation of divisions of the institute is recommended, these subjects are petroleum geology, transportation engineering, and distribution engineering, the committee reports. The American Association of Petroleum Geologists functions as a forum for petroleum geology.

Under the division of production engineering would come technical problems connected with the drilling of oil and gas wells, well equipment, pumping methods, and all handling of the crude oil until it is delivered into lease tanks or gas until it is delivered to transportation lines.

Under refinery technology would be included civil, mechanical and chemical engineering problems and those of applied physics and chemistry, such as distilling, fractionating, treating, and cracking of petroleum and derivatives; adaptation of mechanical equipment such as boilers, pumps and other machinery; recovery of gasoline by absorption and compression at both refineries and natural gasoline plants. It would also concern itself, the committee reports, with corrosion, evaporation and storage problems along with other technical divisions.

Transportation engineering would involve the handling of crude oil from the time it reaches the surface until it is delivered to the refinery and gas, until it reaches the consumer.

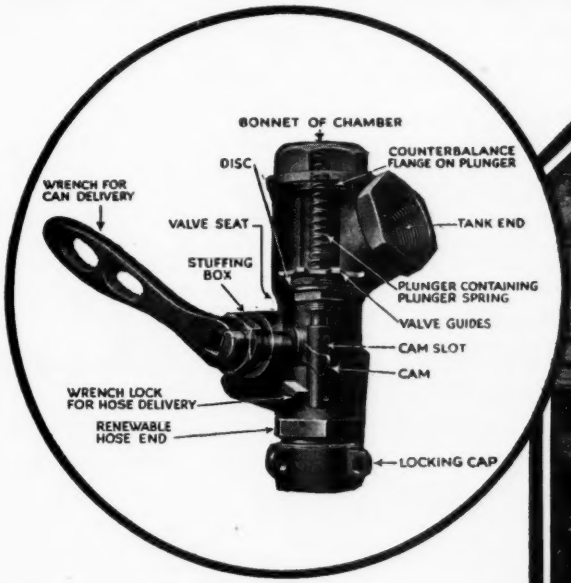
Distribution engineering would embrace consideration of the storing and handling of all marketable petroleum products after these products reach the zone of utilization, such as warehouse and distributing station design, storage problems, mechanical problems with various types of mechanical equipment, as tank trucks and wagons, pumps and other devices.

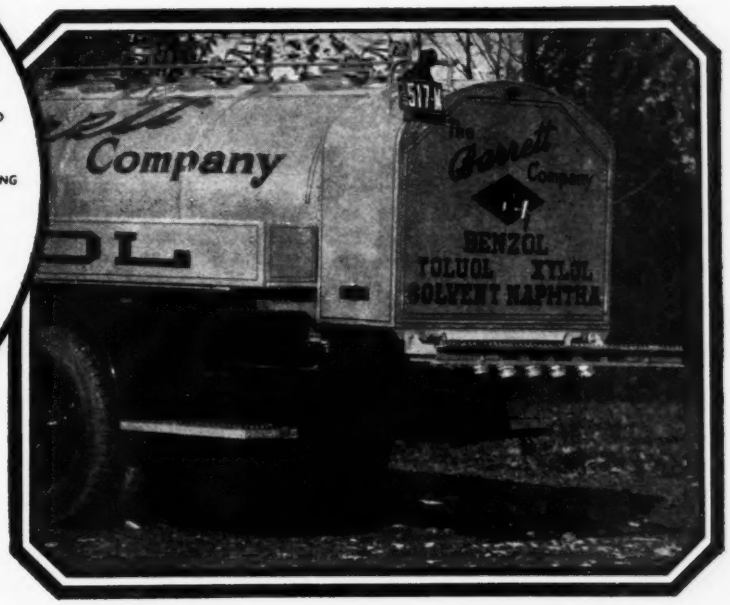
It is proposed that each division should have a chairman, vice-chairman, and salaried executive secretary. There would be regional groups each with a chairman. Divisional and group officers would constitute the division's general committee.

Each division would have a committee of five on papers. This committee would pass on all papers to be presented at meetings or published in a technical journal the institute would publish. A technical coordinating committee would handle jurisdictional questions including the allocation of border line subjects and papers in the various divisions.

The committee explains that it does not wish to minimize the fine technical work done by technical and scientific societies organized outside the oil industry but that it believes the oil industry should provide within itself a means of taking coordinated and official action on technical matters.

E. W. Isom, Sinclair Refining Co., is chairman of the committee. Other members are: W. L. Stewart, Jr., Union Oil Co. of California; R. A. Halloran, Standard Oil Co. of California: R. E. Wilson, Standard Oil Co. of Indiana; K. G. MacKenzie, The Texas Co.; T. G. Delbridge, Atlantic Refining Co.; E. DeGolver, Amerada Petroleum Corp., and Wallace E. Pratt, Humble Oil & Refining Co.





Examine This Tank Truck Faucet!

Every Detail Has Been Perfected

IT will pay you to know this tank truck faucet—so we have opened it for your inspection. The most *casual* study of the above illustration will convince you that the Wheaton Type 24 is a superior faucet—but a *careful* study will show you that *every detail has been perfected.* It is the smoothest, easiest operated faucet ever developed.

The Wheaton Type 24 is *counterbalanced*—and that means smooth, easy action and long life to every part. The counterbalance flange on the upper end of the plunger shown in the illustration above *slows* the shut-off action. When the valve closes—as the plunger goes down—the chamber above the counterbalance flange must fill, and to do so the liquid must pass between the close-fitting flange and the chamber walls. This *further slows* the shut-off action. And this *slow, gentle closing action* relieves the faucet and connections of vibration and shocks.

The Wheaton Type 24 is made of a special-analysis brass alloy—tempered, toughened and tested to assure long life. Every part is precisely fitted and finished to give accuracy and ease of operation. And, like all Wheaton Faucets, Type 24 is self-closing—the operator must *hold* the valve open, as it closes the instant the wrench is released. If it is desired to *lock* the valve open for hose deliveries, a special wrench, No. 5, can be supplied. Sizes 1½ and 2-inches.

Write today for a sample of the Wheaton Type 24 Tank Truck Faucet, and give it your own test. If it does not prove entirely satisfactory you may return it for full credit or refund. Also, send for a copy of the illustrated Wheaton Catalog, which fully describes all the Wheaton Products.

A. W. WHEATON BRASS WORKS, NEWARK, N. J.

Wheaton

FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

U. S. Court Halts Enforcement of "Gas" Specification Posting Act

CLEVELAND, Oct. 7

THE Standard Oil Co. of Ohio has been granted a temporary injunction in the United States district court at Cincinnati, restraining Piqua, O., its mayor, chief of police, and water works engineer from enforcing an ordinance requiring the posting of the gravity and initial boiling and end points of gasoline on the pump through which the gasoline is dispensed. Final hearing of the action has been set for Nov. 25 in the U. S. District court at Dayton, O.

The Piqua posting ordinance was passed Sept. 7 and was to have become effective today. The temporary injunction was granted two days ago on application of W. T. Holliday and Maurice J. Hanning, of Holliday, Grossman & McAfee, Cleveland, counsel for the Standard of Ohio. Hubert B. Fuller of Chamberlin, Marty & Fuller, Cleveland, has been retained by the Ohio Petroleum Marketers Association and will enter the suit at amicus curiae, friend of the court.

Gasoline specifications are not stated in the Piqua ordinance; any grade may be sold, but variances of only 1° Be. in the gravity and 5° F. either way in the initial boiling and end points are permitted from the posted specifications on the pump. If variances exceed those limits, the excess constitutes an offense. The penalty is a fine of $10 to $25 and for subsequent offenses fines of $50 to $100.

The ordinance was fostered by Maurice Wolfe, Meteor Motor Car Co. of Piqua, who operates a chain of low priced bulk storage service stations in Ohio and Indiana. An effort to have such an ordinance passed by the Piqua city council two years ago was made by Wolfe but at that time he did not control the council. He is said to be able to dictate to the city's present legislative body.

WOLFE gives two reasons for wanting the ordinance. One reason is that competitors have sold the same grade of gasoline at two different prices, one price competing with his cut prices. He has told several oil men that he only wished to have his gasoline compared well with some high test gasolines that were sold at a premium in Piqua.

Wolfe also contemplates having the next Ohio general assembly act on a bill similar to the Piqua ordinance. A bill introduced in the last Ohio legislature which, if passed, would have required the posting of gravity specifications at the pumps was killed by a committee after several hearings at which oil men showed that gravity was not a basis for judging the quality of motor fuel.

It also is said that Wolfe will attempt to have a like ordinance introduced in the Findlay, O., council. He has a station in Findlay.

The Standard contends that it is impossible to comply with the requirements of the ordinance, that the tests required do not truly measure the qualities of a gasoline and that the ordinance violates the fourteenth amendment to the U. S. constitution, which forbids depriving any citizen of property without due process of law.

The Standard in its bill of complaint points out that the gasoline in its storage tanks at its Piqua bulk station and in the tanks at its service stations and the tanks of its dealer customers, is changing almost daily because new and different gasoline is being added as the supply is depleted and the character of the gasoline also alters to some degree under varying atmospheric conditions.

THE Standard pointed out that, owing to evaporation, the characteristics of the gasoline changed from the shipping point to the place of dispensing and that it was impractical to make tests of its physical and chemical properties at the point of dispensing, that is, at the pump.

The ordinance specifies that tests shall be made by the method prescribed by the U. S. Government Specifications Board for gasoline distillation. The Standard points out that a slight variation in the setting up of the distillation apparatus will cause changes in the results that will be in excess of the variances allowed from the posted gravity, boiling point and end point figures. Different operators will obtain different results with the same gasoline and apparatus, it also is pointed out.

The company contends that it would be necessary to make tests of the contents of each tank each time more gasoline was added thereto and that the time of one person skilled in the making of tests would be required.

The ordinance requires that the refiner or jobber that sells gasoline for resale, must supply the resale agent with a memorandum of the gravity and initial and end points. It would be necessary for the refiner or the jobber to make a test of each dealer's gasoline each time a delivery was made to that dealer, the Standard alleges. Often it would mean daily gravity and distillation tests of service station tank contents. Concerning the specification required in the Piqua ordinance, the Standard said:

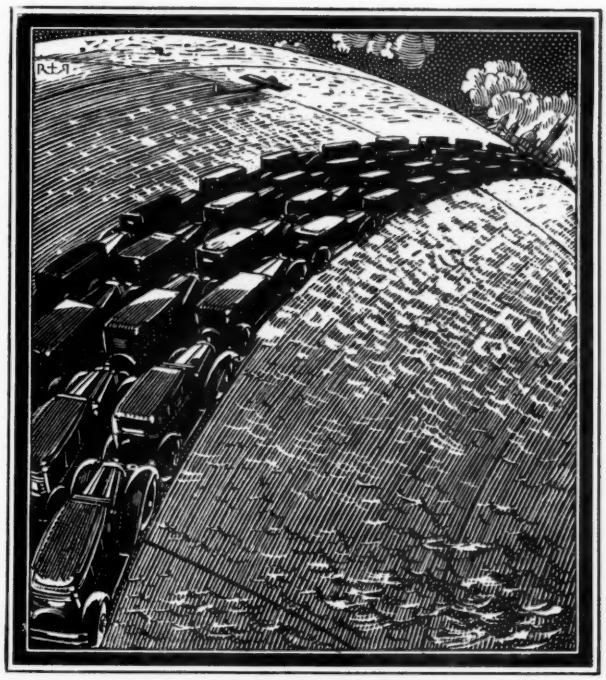
"The gravity of gasoline is not a test of the qualities thereof and has nothing to do with its efficiency as a motor fuel. The gravity of gasoline having exactly the same efficiency as a motor fuel will vary more than one degree according to what crude petroleum it was manufactured from. Casinghead gasoline made from natural gas has a very high gravity, and the gravity of gasoline can be raised by a mixture with casinghead gasoline without improving or without affecting its quality as a motor fuel.

"The initial and final boiling points of gasoline do not indicate in any way the quality thereof, nor its efficiency as a motor fuel. The distillation test for determining boiling points which is referred to in said ordinance is a physical test and does not in any way analyze or show the chemical contents of the gasoline. Gasoline being a combination of several chemical series, cannot be tested by a physical test. . . .

"The said ordinance if enforced will expose the plaintiff to the danger of fraudulent competition and the public to fraud and misrepresentation in that it requires the sale and purchase of gasoline upon a basis of misleading data. An inferior and cheaper costing gasoline may have a very high gravity and very low initial and final boiling points and yet because of a lack of a continuous chain of boiling points between the initial boiling and end points, may be a poor motor fuel. A company like the plaintiff selling a carefully blended product with a carefully arranged chain of boiling points, and with carefully arranged chemical composition, would be forced under said ordinance to compete with inferior gasoline upon a basis of posting of immaterial and misleading data.

"THE effect of legislative requirement to post gravity and initial and final boiling points, would be to lead the public to believe that those were the decisive or at least material factors in the quality of gasoline, and would make easy the palming off upon the public of an inferior product, as though it were a superior product."

London speaking. . . We want 1000 cars



THE MANAGING DIRECTOR of a motors company in London talked with an automobile factory in the American Middle West and ordered a thousand cars. Amount involved, $1,500,000. Communication was over the regular long distance lines, and by radio telephone across the Atlantic. Delivery dates and other details were arranged; business conditions of the moment were discussed.

"I HAD URGENT NEED yesterday," writes a London barrister, "to confer with a brother lawyer in New York. . . . The conference was disposed of satisfactorily in 3 minutes."

A New York department store sold so much of a certain silk that it had to know whether more could be shipped from London immediately. More was quickly ordered by transatlantic telephone.

"I cannot resist letting you know," writes the president of another American company, "the result of a telephone call with London this morning. . . . It was the thrill of a lifetime. . . . And it's wonderful how much conversation can be crowded into a four or five minute talk."

Use transatlantic service for business and social calls. It's simplicity itself. Just ask for "Long Distance" and place your call in the usual way. . . . *Number, please?*

BELL LONG DISTANCE SERVICE

World's Oil Production Gaining; United States Responsible

NEW YORK, Oct. 8

THE world's petroleum production for 1927 is estimated at 1,229,500,000 barrels, an increase of 133,566,000 barrels, or about 12 per cent over 1926, whereas the world production of oil had remained practically stationary the four preceding years, according to a published statement by Valentine R. Garfias, manager of the foreign oil department of Henry L. Doherty & Co.

Of this estimated total for 1927, the United States will contribute 890,000,000 barrels, as compared with 770,874,000 barrels of actual production in 1926, Mr. Garfias says. This is an increase of 15.5 per cent during 1927, and the United States will contribute nearly 11 per cent of the total 12 per cent gain in world production over 1926.

Other countries which show relatively important gains over 1926 are Russia, 70,000,000 barrels in 1927, as against 62,941,000 barrels in 1926; Venezuela, 60,000,000 barrels in 1927, as against 37,381,00 barrels in 1926; Colombia, 14,000,000 barrels in 1927, against 6,444,000 barrels in 1926.

At about this time a year ago, Mr. Garfias estimated world production for 1926, placing the figure at 1,071,330 barrels. Actual production, as reported later by the Bureau of Mines, was 1,095,934,000 barrels, his error being 2.25 per cent. United States production he placed for 1926 at 757,000,000 barrels, whereas actual output was 770,874,000 barrels.

"Estimates for 1927 clearly show that, for the present and in the near future, stabilization of the world's petroleum industry hinges on control of American production," Mr. Garfias states. "Now more than ever, the United States is the dominant factor in production and this again emphasizes the urgent need of establishing in this country some effective machinery that will make impossible a repetition of the present concentrated over-production, with its accompanying inevitable waste." He does not offer any suggestions as to what machinery can be set up to accomplish this end, however.

Mr. Garfias' estimates as to individual countries contributing to the world's production are as shown in table below:

WORLD'S PETROLEUM PRODUCTION

(In thousands of bbls.)

Country	1925	1926	1927*
United States	763,743	770,874	890,000
Russia	52,448	62,941	70,000
Mexico	115,515	90,421	63,000
Venezuela	19,687	37,381	60,000
Persia	35,038	35,842	36,000
Roumania	16,650	23,292	28,000
Dutch East Indies	21,422	20,817	20,000
Colombia	1,007	6,444	14,000
Peru	9,252	10,782	11,000
India	8,274	8,270	8,000
Argentina	6,336	7,947	8,000
Poland	5,960	5,844	5,900
Trinidad	4,387	5,278	5,400
Sarawak	4,257	4,942	5,000
Japan	1,694	1,557	1,700
Egypt	1,226	1,181	1,150
Germany	541	653	700
France	459	478	500
Canada	332	365	500
Ecuador	160	214	320
Czechoslovakia	158	150	150
Others	195	261	180
	1,068,741	1,095,934	1,229,500

*Estimated by Valentine R. Garfias, manager, foreign oil department, Henry L. Doherty & Co.

Many Companies Helping in Study Of Gas Conservation

TULSA, Oct. 8

Groups of engineers and geologists have been meeting in several cities of the United States the past two weeks, conferring, bringing together the data they have on natural gas conservation, comparing it and formulating reports thereon. They are the members of the four regional committees authorized by the American Petroleum Institute Committee of Seven. At Colorado Springs, Sept. 12, this committee named the chairman of the sub-committees and assigned them to bring to Ponca City Oct. 19 as much information of an exact nature as can be had on the function of natural gas as an agency for producing oil and the best means for its utilization.

The regional committeemen will meet in Ponca City Oct. 17, two days before the A.P.I. committee meets, to prepare a report. It is not expected this report will be final. On the contrary,

The question, it is pointed out, is so broad and there has been so little experimentation of a practical nature to afford detailed studies that no final answer can be given as to just how gas should be utilized in producing oil. Among the many phases of the subject which will be discussed at Ponca City are the effects of back-pressuring wells, the physical and economic aspects of the gas lift, effective oil-gas ratios in flowing wells and the effect upon daily and final recovery of various well spacing plans.

The procedure in the work thus far has been to hold group meetings and assign phases of the question to several men. Thus, a regional committee, several engineers will devote their time to collecting data on well spacing. Others will prepare to report on gas lift or back pressuring. Each regional committee will bring to Ponca City a tentative report and the findings of the four regional committees will be incorporated in one report to the A.P.I. committee, in turn, will formulate a report to the membership of the A.P.I. when it meets in Chicago in December.

The Oklahoma-Kansas regional committee is the largest of the four in personnel. It was organized by Dr. W. P. Haseman, director of research for the Marland Oil Co., who is the regional chairman. Dr. Haseman named as assistants in the organization work H. P. Porter, Gypsy Oil Co.; C. D. Watson, Carter Oil Co.; T. A. Hall, Tidal Oil Co.; E. J. McKee, Phillips Petroleum Co. The other members of the committee are as follows:

G. S. Rollin, Roxana Petroleum Corp.; C. V. Millikan, Amerada Petroleum Corp.; W. W. Scott, Pure Oil Co.; E. E. Claytor, Shaffer Oil & Refining Co.; J. M. McWilliams, Skelly Oil Co.; W. K. Whiteford,

Barnsdall Oil & Gas Co.; R. A. Griffith, Sinclair Oil & Gas Co.; J. N. McGirl, Silurian Oil Co.; George O. Moody, Mid-Continent Petroleum Corp.; E. J. Gorman, Twin State Oil Co.; W. W. Fleming, Mid-Kansas Oil & Gas Co.; R. B. Pringle, Independent Oil & Gas Co.; A. W. Leonard, Devonian Oil Co.; Luther White, J. A. Hull Oil Co.; J. H. Gardner, Gardner Petroleum Co.; G. A. Dye, Wilcox Oil & Gas Co.; C. E. Beecher, Empire Companies; M. J. Kirwan, Indian Territory Illuminating Oil Co.; H. G. Ellis, Wiser Oil Co.; B. F. Lindsley, R. R. Brandenthaler, L. Schmidt, C. I. Swartz and R. Van A. Mills, all of the Bureau of Mines; H. C. Fitzpatrick, Prairie Oil & Gas Co.; J. B. Umpleby, Goldelline Oil Co.; Frank Buttram, Buttram Petroleum Corp.; D. W. Ohern, Borealis Oil Co.; J. L. Smith, state corporation commission; H. C. George, University of Oklahoma; Wirt Franklin, Ardmore, Okla.; E. P. Jones, Okmulgee District Oil & Gas Association; Leigh Taliaferro, Wentz Oil Co.; K. C. Sclater, Marland Oil Co.

The Rocky Mountain committee, organized by Max W. Ball, chairman, is as follows:

Fred E. Wood, Midwest Refining Co.; K. B. Nowels, Bureau of Mines; J. B. Steele, U. S. Geological Survey; P. F. Shannon, Colorado School of Mines; L. V. Fees, consulting geologist; E. M. Parks, consulting geologist; Sam Grimsfelder, Union Oil Co. of California; George G. Law, U. S. Geological Survey; W. W. Moore, Texas Production Co.; M. F. Coolbaugh, Colorado School of Mines; L. D. Roberts, Colorado School of Mines; F. E. E. Gorman and O. C. Lester, University of Colorado.

In California, M. E. Lombardi of the Standard Oil Co. of California enlisted the aid of the following:

Clark Gester, Standard Oil Co. of California; David Folsom, consultant; F. G. Tickell, Stanford University; Stanley Herold, Stanford University; L. C. Uren, University of California; R. D. Bush, California state mining bureau; L. C. Decius, Associated Oil Co.; E. G. Gaylord, E. W. Wagy, R. A Halloran and Henry N. Herrick, Standard Oil Co. of California; L. H. Cranson, Honolulu Consolidated Oil Co.; T. E. Swigart, Shell Co. of California; A. S. Hayes and S. J. Dickey, General Petroleum Corp.; A. H. Bell, Marland Oil Co. of California; V. H. Wilhelm, California Petroleum Corp.; L. A. Holmes, Chanslor-Canfield Midway Oil Co.; William Moeller, Jr., Midway Gas Co.; E. C. Ruble and Robert Haylet, Union Oil Co. of California.

John Suman, of the Humble Oil & Refining Co., named the following to the Texas-Louisiana committee:

E. O. Bennett, W. V. Vietti and E. V. Foran, Marland Oil Co. of Texas; Dr. Wilson, Rice Institute and Miss Mead, Humble Oil & Refining Co.

Pennsylvania Oil PLUS

Plus what? — Plus the fact that it is blended from 450 Bright Stock (Sharples Process) refined in ONE Freedom Plant — and from 100% Pennsylvania Crude Neutrals refined in ANOTHER Freedom Plant. Thus, under one supervision, with the one guarantee of a 48 year old refinery, a line of Freedom 100% Pennsylvania Motor Oils is blended to specifications which appeal to discriminating jobbers — a complete line of oils that enable you to build your business and your customers' businesses on repeat order foundations.

Guaranteed 100% PURE PENNSYLVANIA OIL

For nearly 50 years, The Freedom Oil Works Company has specialized in the refining and blending of 100% Pennsylvania Oils. In one way, that explains why jobbers the country over come to this concern for their requirements.

Deliveries can be made immediately, in tank cars, compartment tank cars, barrels, or drums.

Write for quotations.

Also available for immediate shipment

450 Bright Stock (Sharples Process) which requires less Neutral to blend to the ordinarily required specifications.

100% Pennsylvania Motor Oils, *blended to your own Specifications*, from Freedom 450 Bright Stock and Freedom 100% Pennsylvania Crude Neutrals.

Freedom Quality Stocks
600 Steam Refined
635 Steam Refined
650 Steam Refined

Freedom 300 Mineral Seal Oil made to Railroad Specifications.

Freedom Filtered Burning Oils.

The Freedom Oil Works Company
Freedom, Penna.
Established 1879
Refineries at Freedom and Coraopolis, Pennsylvania

FREEDOM

Compilation Of Mid-Continent Refinery Operations

All Rights Reserved to National Petroleum Publishing Co.

Mid-Continent Refinery Operations Week Ended October 7 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended Oct. 7	Total Week Ended Sept. 9
Plants Reporting	23	46	41	14	124	124
Crude Capacity (bbls.)	106,200	165,900	144,300	53,700	470,100	470,100
Cracking Capacity	29,000	45,800	15,750	20,200	110,750	110,750
Da. Av. Crude Runs	54,855 + 5.9	98,607 — 13.9	67,437 + 6.8	40,030 — 2.0	260,929 — 3.5	279,875
Da. Av. Other Oils	3,523 — 31.5	1,429 — 75.5	7,212 + 18.4	1,016 — 2.2	13,180 — 27.2	17,144
GASOLINE—Gallons						
Stocks, Oct. 1	6,250,000	30,951,000	17,251,000	2,585,000	57,037,000	64,376,000
Prod. 10-1 to 10-8	7,744,000 — 4.3	15,378,000 — 14.6	7,155,000 — 6.3	3,517,000 — 3.3	33,794,000 — 9.6	37,978,000
Ship. 10-1 to 10-8	7,436,000 — 6.3	16,940,000 — 2.8	6,986,000 + 17.2	3,346,000 — 11.7	34,708,000 — 1.1	41,896,000
Stocks, Oct. 8	6,558,000 + 4.9	29,389,000 — 5.0	17,420,000 + 1.0	2,756,000 + 6.6	56,123,000 — 1.6	60,478,000
Ratio Sales to Prod.	96.0%	110.2%	97.6%	95.1%	102.7%	110.2%
KEROSENE—Gallons						
Stocks, Oct. 1	3,041,000	4,806,000	1,496,000	703,000	10,046,000	10,336,000
Prod. 10-1 to 10-8	1,417,000 + 16.2	2,425,000 — 23.4	1,055,000 — 18.1	479,000 + 29.9	5,376,000 — 15.4	6,480,000
Ship. 10-1 to 10-8	1,124,000 — 29.6	2,075,000 — 27.3	1,343,000 + 9.9	581,000 + 10.0	5,123,000 — 17.4	6,658,000
Stocks, Oct. 8	3,334,000 + 9.6	5,156,000 + 7.3	1,208,000 — 19.3	601,000 — 14.5	10,299,000 + 2.5	10,157,000
Ratio Sales to Prod.	79.3%	85.6%	127.3%	121.3%	95.3%	102.7%
STOVE DISTILLATE—Gallons						
Stocks, Oct. 1	4,802,000	7,664,000	1,779,000	16,000	14,261,000	13,176,000
Prod. 10-1 to 10-8	381,000 — 1.0	882,000 — 13.6	343,000 + 2.7	61,000 + 74.3	1,667,000 — 6.1	1,699,000
Ship. 10-1 to 10-8	659,000 + 22.3	956,000 + 5.2	205,000 — 41.4	57,000 — 44.7	1,877,000 — 1.3	1,168,000
Stocks, Oct. 8	4,524,000 — 5.8	7,590,000 — 1.0	1,917,000 + 7.8	20,000 + 25.0	14,051,000 — 1.5	13,707,000
Ratio Sales to Prod.	173.0%	108.4%	59.8%	93.4%	112.6%	68.7%
GAS OIL—Gallons						
Stocks, Oct. 1	8,174,000	41,196,000	16,765,000	8,484,000	74,619,000	74,645,000
Prod. 10-1 to 10-8	1,557,000 — 14.3	1,716,000 — 30.0	1,350,000 + 83.2	1,693,000 + 12.4	6,316,000 — 3.0	7,315,000
Ship. 10-1 to 10-8	1,855,000 — 18.8	2,446,000 + 13.2	1,573,000 + 84.4	1,368,000 — 48.6	7,242,000 — 9.0	4,889,000
Stocks, Oct. 8	7,876,000 — 3.6	40,466,000 — 1.8	16,542,000 — 1.3	8,809,000 + 3.8	73,693,000 — 1.2	77,071,000
Ratio Sales to Prod.	119.1%	142.5%	116.5%	80.8%	114.7%	66.8%
FUEL OIL—Gallons						
Stocks, Oct. 1	15,344,000	45,744,000	33,217,000	10,844,000	105,149,000	99,304,000
Prod. 10-1 to 10-8	5,760,000 + 8.7	6,582,000 — 9.6	8,094,000 + 1.1	5,930,000 + 11.9	26,366,000 + 1.9	28,439,000
Ship. 10-1 to 10-8	5,696,000 + 2.4	5,972,000 — 9.0	7,882,000 — 5.7	5,501,000 + 31.4	25,051,000 + 1.6	28,414,000
Stocks, Oct. 8	15,408,000 + 0.4	46,354,000 + 1.3	33,429,000 + 0.6	11,273,000 + 4.0	106,464,000 + 1.3	99,369,000
Ratio Sales to Prod.	98.9%	90.7%	97.4%	92.8%	95.0%	99.9%

Gasoline Produced by Various Methods, Week Ended October 7

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	5,284,000	68.2	11,158,000	72.6	5,440,000	76.0	1,257,000	35.8	23,139,000	68.5
Cracked	2,017,000	26.1	3,074,000	20.0	1,474,000	20.6	1,770,000	50.3	8,335,000	24.6
Natural	443,000	5.7	1,146,000	7.4	241,000	3.4	490,000	13.9	2,320,000	6.9
Total	7,744,000		15,378,000		7,155,000		3,517,000		33,794,000	

+ or — columns are changes over previous week.

124 Mid-Continent Refiners Curtail Crude Runs

Staff Special—By Telegraph

TULSA, Oct. 11

CHARGES of crude oil to stills were reduced 15,900 barrels daily average in the week ended Oct. 7 by the 46 Oklahoma refiners that report their operating statistics to NATIONAL PETROLEUM NEWS. Kansas refiners increased their charges 3,000 barrels daily average and Texas refiners increased their 4,200 barrels. Charges at 124 Mid-Continent refineries averaged 260,929 barrels daily that week, a decline of 9,460 barrels daily average from charges in the preceding week. Charges of other oils were reduced 5,000 barrels daily average.

Curtailment of crude runs caused gasoline output to fall 3,500,000 gallons to 33,794,000 gallons. Oklahoma refiners reduced their production 2,600,000 gallons to 15,379,000 gallons. Shipments from Oklahoma plants receded only 400,000 gallons

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Oct. 7. Change in stocks figured from Sept. 9.

GASOLINE

	Gallons
Production	148,966,000
Shipments	153,321,000
Net change in stocks	—4,355,000
Ratio sales to production	102.9%

KEROSENE

Production	24,364,000
Shipments	24,222,000
Net change in stocks	+142,000
Ratio sales to production	99.4%

STOVE DISTILLATE

Production	6,631,000
Shipments	6,287,000
Net change in stocks	+344,000
Ratio sales to production	94.8%

GAS OIL

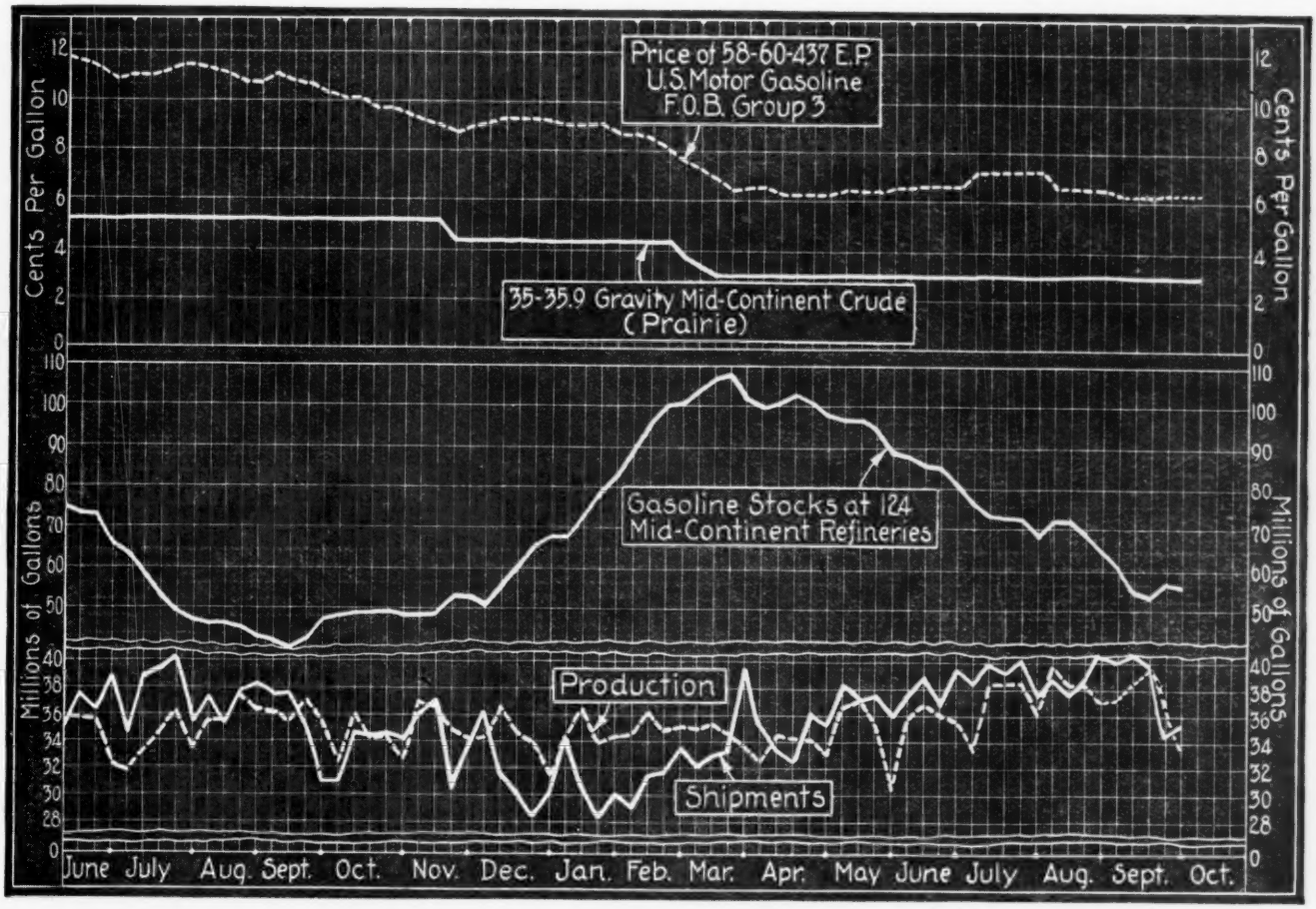
Production	27,130,000
Shipments	30,508,000
Net change in stocks	—3,378,000
Ratio sales to production	112.5%

FUEL OIL

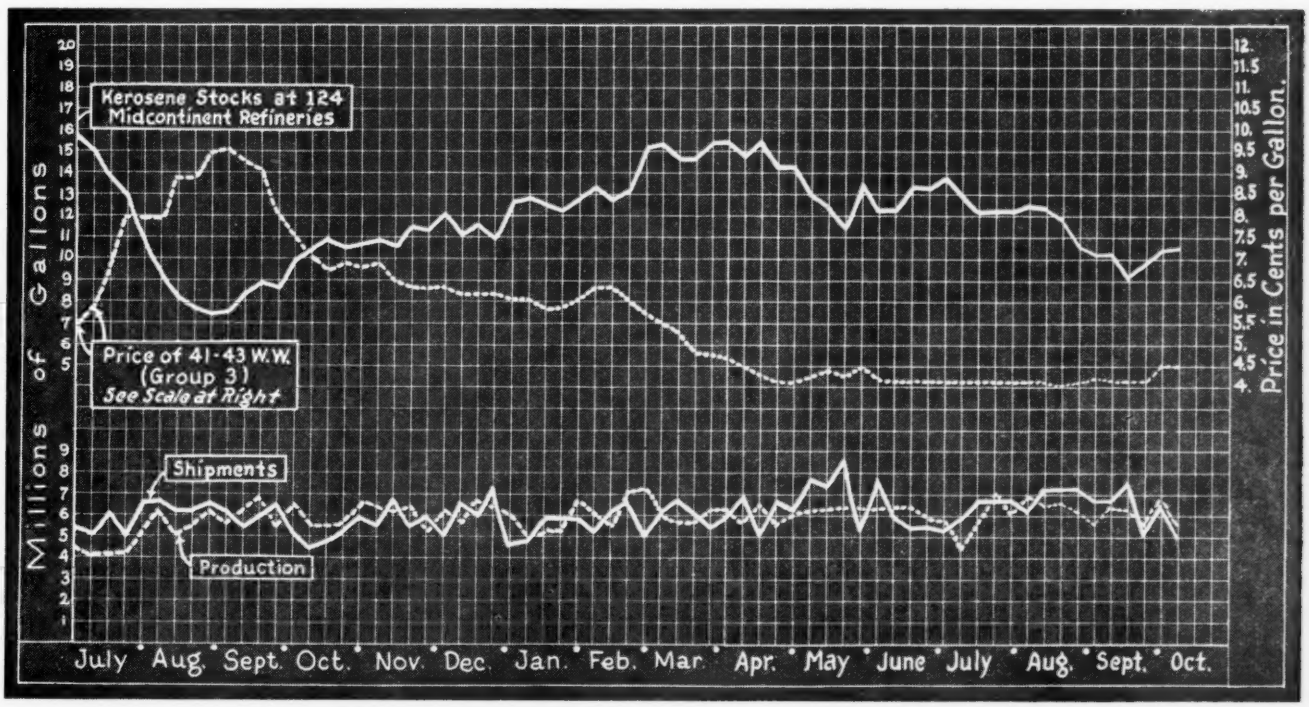
Production	110,082,000
Shipments	102,987,000
Net change in stocks	+7,095,000
Ratio sales to production	93.6%

Barometer of Mid-Continent Refinery Market—Week Ending October 7

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

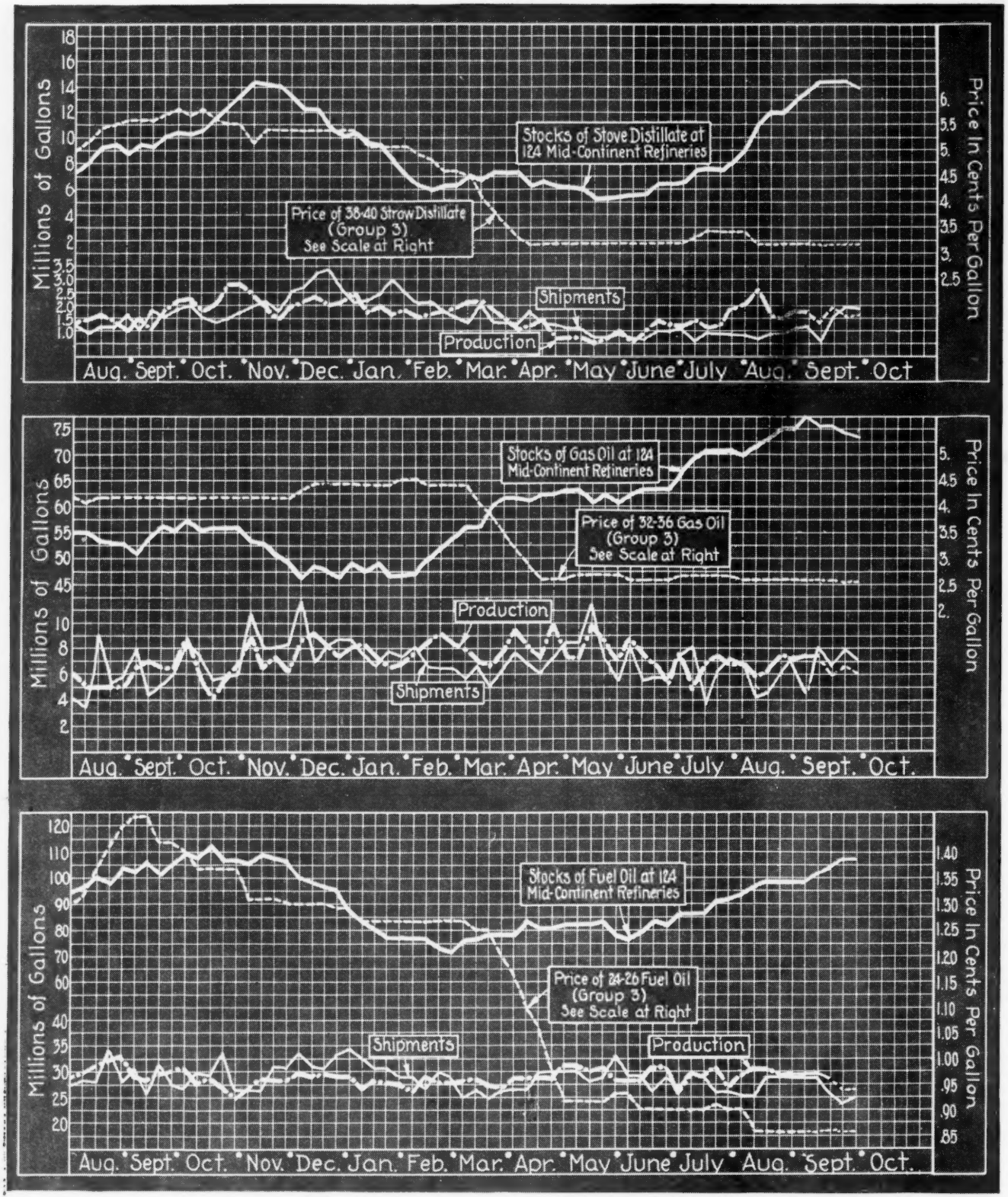

Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Cents Per Gallon
Gasoline Stocks at 124 Mid-Continent Refineries
Millions of Gallons
Production
Shipments
June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date shown in table on opposite page


Kerosene Stocks at 124 Midcontinent Refineries
Price of 41-43 W.W. (Group 3) See Scale at Right
Shipments
Production
Millions of Gallons
Price in Cents per Gallon.
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.

Barometer of Mid-Continent Refinery Market—Week Ending October 7

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 124 Plants to National Petroleum News

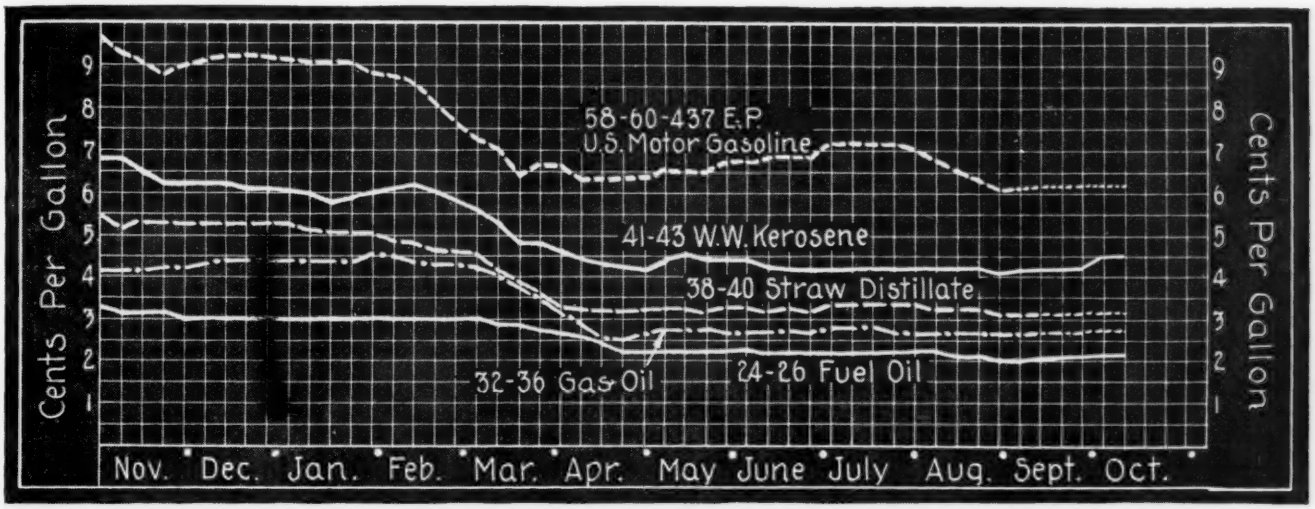

Millions of Gallons
Price In Cents Per Gallon
Stocks of Stove Distillate at 124 Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) See Scale at Right
Shipments
Production
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct
Millions of Gallons
Price In Cents Per Gallon
Stocks of Gas Oil at 124 Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) See Scale at Right
Production
Shipments
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.
Millions of Gallons
Price In Cents Per Gallon
Stocks of Fuel Oil at 124 Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) See Scale at Right
Shipments
Production
Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct.

to 16,950,000 gallons, so Oklahoma stocks fell 1,570,000 gallons. Elsewhere gasoline stocks increased as follows: 300,000 gallons in Kansas, 160,000 gallons in Texas, and 170,000 gallons in Arkansas and Louisiana. At the 124 plants stocks were decreased 900,000 gallons to 56,123,000 gallons.

Kerosene production was approximately 1,000,000 gallons less than in the preceding week. Shipments also fell 1,000,000 gallons. Kerosene output in Oklahoma was curtailed about 700,000 gallons and shipments fell as much. Texas and Louisiana-Arkansas refiners increased output and shipments, and drew on stocks. At the 124 plants stocks were increased 250,000 gallons to 10,299,000 gallons.

Distillate stocks were reduced 210,-

Current Prices of Principal Mid-Continent Refined Products



Prices shown above are on Group 3 basis and extended to date shown in Refinery Market Tables in Market Section of this Issue

000 gallons although shipments were less than in the preceding week. Production also was less. Stocks Oct. 7 totaled 14,051,000 gallons.

Gas-oil stocks were reduced almost 1,000,000 gallons. Stocks accumulated in only the Louisiana-Arkansas district. Stocks Oct. 7 were 73,693,000 gallons.

Fuel oil shipments totaled 25,051,000 gallons, a gain of 300,000 gallons. Production was increased 400,000 gallons. Stocks rose 1,300,000 gallons.

Teapot Produces Less Than 3,500,000 Bbls.

Staff Special

TULSA, Oct. 11.—The Teapot Dome field has produced since its opening in 1922 less than 3,500,000 barrels of crude. At this time there are 62 producing wells, some of them making small production, with total daily yield of between 800 and 900 barrels. To the end of last year the total yield was 3,223,000 barrels of which 444,000 barrels was the Navy's share as royalty oil.

Out of a total of 9,700 acres in the reserve less than 1,000 acres has been proven for oil and the limits of oil production probably will not be much increased by further drilling. Several dry holes have been drilled and it has been found that the best acreage lies against the south end of the Salt Creek field, and on the same structure.

A considerable acreage has been proven for gas and some of this is being utilized in the natural gasoline plant of the New York Oil Co. The residue from the plant is piped to Casper.

The expenditure in developing the lease has been large and many millions went into the construction of the 700-mile pipe line to a point near Kansas City. This line is of 8, 10, and 12-inch pipe and has capacity of around 40,000 barrels daily. It has been in operation since completion but runs have never been much above 15,000 barrels daily, and at this time is running around 11,000 barrels, largely royalty oil from the Salt Creek Field which is purchased by the Sinclair Crude Oil Purchasing Co.

The latter company constructed a tank farm at Clayton, Wyo., with 12,000,000 barrel's capacity which is practically filled with Salt Creek and Teapot oil.

The Dome began producing in October, 1922, and its best year was 1923 when 1,131,000 barrels was the gross recovery. The next year recovery was a little more than 1,000,000 barrels and for the next two years the output continued to fall as the property was managed by receiver, and no drilling was done.

Standard of New York Quitting Mexico

HOUSTON, Oct. 6.—Equipment in the Tampico district of Mexico belonging to subsidiaries of Standard Oil Co. of New York has been ordered removed by Vice President E. E. Plumly of Magnolia Petroleum Co., at Beaumont, according to an announcement from his offices.

The equipment includes a complete refinery built at Tampico by Continental Mexican Petroleum Co., subsidiary of General Petroleum Corp., about seven years ago, but never operated. Producing equipment, including boilers, tanks, pumps and pipelines of the New England Fuel Oil Corp., field subsidiary in Mexico of the Magnolia, are to be similarly salvaged. The New England has produced only negligible quantities of crude in the Tampico district for several years.

Operations of both companies were already at a minimum when the Mexico City government began enforcing its petroleum regulations about a year ago, so that the new order is only indirectly attributed to that situation by those "in the know" of conditions.

Storerooms stocks, equipment and salvaged materials affected by the order will be transferred to Beaumont as a concentration base, there to be reconditioned and used in various Magnolia operations.

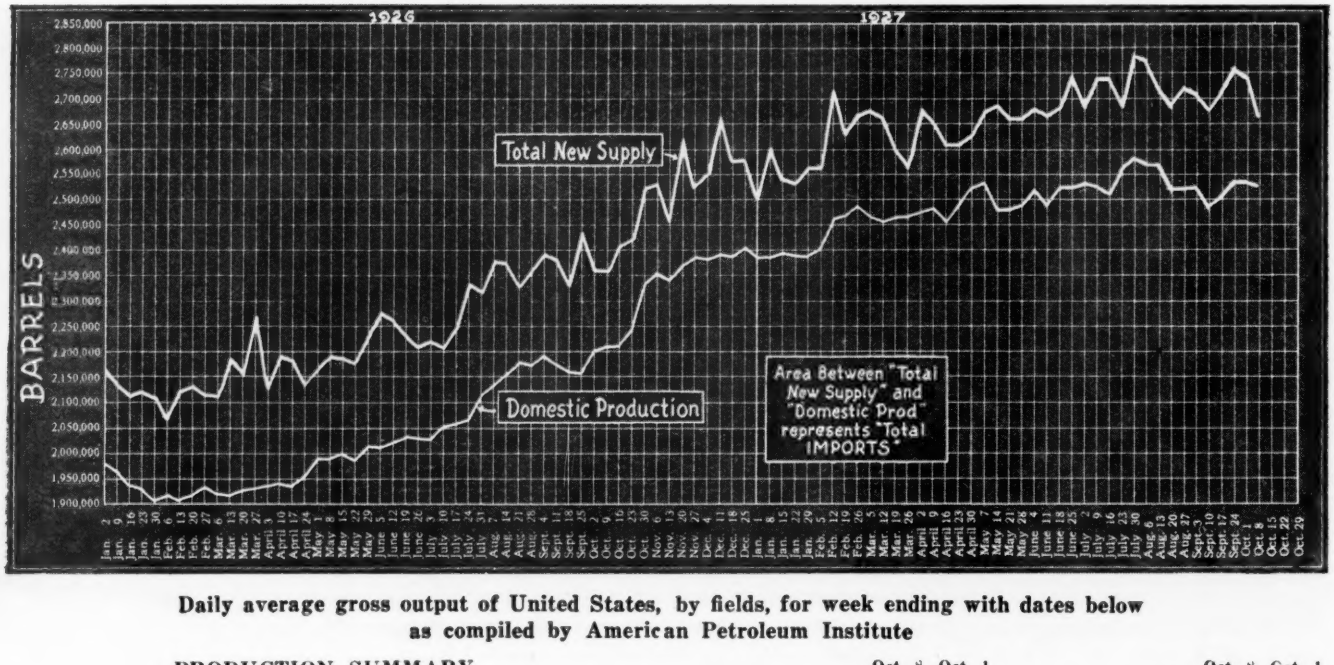
Two New Geophysical Domes Mapped

HOUSTON, Oct. 6.—Two new geophysical domes have been found in Gulf Coastal Louisiana and locations have been made on each of them for test wells to be drilled by the Louisiana Land & Exploration Co., of Houston.

A new dome has been found in the south part of Calcasieu lake, 8803 feet west and 3182 feet north of the northeast corner of 1-14S-9W, and location for the company's No. 2 Calcasieu (state of Louisiana) will be located at this point on piling foundation in the lake. The test will be drilled with a gasoline rig.

The second dome found by the company is in Vermilion bay and a test of the structure will be made about three and a quarter miles southwest of Cypremort Point. The test, to be known as No. 2, is a similar distance from the No. 1 test that was recently abandoned. This location also calls for piling foundation, but drilling will be with the steam rig previously used on No. 1.

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Oct. 8	Oct. 1
Production East of Rockies	1,893,800	1,901,650
Decrease		7,850
Total production in U. S.	2,526,800	2,536,950
Decrease		10,150
Crude oil imports	128,857	197,571
Decrease		68,714
Total crude supply	2,655,657	2,734,521
Decrease		78,864

OKLAHOMA

	Oct. 8	Oct. 1
North Braman	2,650	2,800
South Braman	2,400	2,450
Blackwell	3,950	3,950
Hubbard	4,000	4,000
Thomas	3,750	3,750
Tonkawa	18,800	18,850
Garber	10,800	10,850
Burbank	35,050	35,450
Osage, outside Burbank	30,800	30,800
Watchorn	1,800	1,800
Cushing	21,300	21,250
Yale Jennings	9,650	9,650
Davenport	2,800	2,900
Bristow-Slick	24,900	24,950
North Okmulgee	16,200	16,200
Lyons-Deaner	6,500	5,050
Stroud	1,250	1,300
Cromwell	11,800	13,200
Papoose	6,250	6,350
Wewoka	14,050	14,200
Seminole	70,150	71,750
Bowlegs	136,700	140,900
Searight	30,600	30,500
Little River	37,500	31,550
Earlsboro	178,600	179,650
Duncan district	7,000	6,950
Graham	6,500	6,650
Fox	1,900	1,900
Healdton	15,000	14,950
Hewitt	9,500	9,700
Scholem Alechem	15,500	15,850
Others	69,350	69,600
Total, Oklahoma	807,000	809,700
Decrease		2,700

KANSAS

Greenwood County	32,600	32,800
Florence-Covert	1,500	1,500
Peabody-Elbing	3,850	3,800
Eldorado-Towanda	14,250	14,300
Augusta-Fox-Bush	4,200	4,200
Rainbow Bend	2,150	2,150
Russell	2,500	2,500
Churchill	13,850	13,750
Others	29,900	30,000
Total, Kansas	104,800	105,000
Decrease		200

NORTH LOUISIANA

Homer	4,700	4,700
Haynesville	7,100	7,050
Caddo, light	13,350	13,500
Caddo, heavy	4,800	4,800
De Soto, Red River	4,050	4,050
Elm Grove	700	700
Bellevue	1,200	1,150
Cotton Valley	5,200	5,350
Urania	9,750	9,900
Pleasant Hill	1,000	1,150
Total, North Louisiana	51,850	52,350
Decrease		500

ARKANSAS

El Dorado	5,300	5,450
Smackover, light	9,600	9,850
Smackover, heavy	78,100	78,350
Stephens	1,200	1,200
Nevada	2,850	2,550
Lisbon	3,050	3,050
Others	100	100
Total, Arkansas	100,200	100,550
Decrease		350

TEXAS (OUTSIDE GULF COAST)

Panhandle District

	Oct. 8	Oct. 1
Hutchinson County	69,100	69,150
Carson County	8,500	8,600
Gray County	11,550	11,000
Wheeler County	1,500	1,400
Others		50
Total, Panhandle District	90,650	90,200
Increase		450

North Texas

Burkburnett	13,100	13,000
Electra	12,500	12,400
Iowa Park and K-M-A	2,550	2,600
Wilbarger	11,750	11,500
Archer County	25,700	25,950
Montague-Cooke	16,800	16,600
Others	600	650
Total, North Texas	83,000	82,700
Increase		300

West Central Texas

Stephens County	8,300	8,300
Eastland-Desdemona	8,950	9,400
Brown County	22,000	23,000
Coleman County	1,100	1,200
Callahan County	4,300	4,000
Shackelford County	5,450	5,650
Young County	10,500	10,350
Throckmorton County	1,300	1,350
Palo Pinto County	700	700
Others	1,450	1,400
Total, West Central Texas	64,050	65,350
Decrease		1,300

West Texas

Jones County	1,550	1,800
Mitchell and Scurry Counties	3,750	3,700
Howard County	3,100	3,200
Reagan County	23,200	24,050
Crane and Upton Counties	137,850	137,150
Crokett County	2,550	2,300
Pecos County	27,100	24,500
Winkler	9,550	8,950
Others	2,500	2,400
Total, West Texas	211,150	208,050
Increase		3,100

East Central Texas

Mexia	9,400	9,450
Currie	700	650
Richland	750	750
Wortham	2,750	2,750
Corsicana-Powell	14,700	14,800
Nigger Creek	1,600	1,650
Total, East Central Texas	29,900	30,050
Decrease		150

Southwest Texas

Luling	15,200	15,650
Lytton Springs	1,550	1,700
Somerset	850	900
Laredo District	8,950	9,100
Dale	550	1,000
Others	450	550
Total, Southwest Texas	27,550	28,900
Decrease		1,350
Total, Texas (Outside Gulf Coast)	506,300	505,250
Increase		1,050

GULF COAST

Coastal Texas

West Columbia	10,000	10,500
Demon Mound	900	900
Big Creek	3,000	2,700
Boling	2,250	2,400
Blue Ridge	4,000	4,300
Pierce Junction	8,350	7,700
Humble	2,000	2,050
Goose Creek	8,000	7,900
South Liberty	2,600	2,650
Hull	16,950	15,850
Saratoga	900	900
Batson	1,400	1,150
Sour Lake	4,050	4,000
Spindletop	52,950	54,250
Orange County	4,400	4,600
Others	3,500	3,700
Total, Coastal Texas	125,250	125,550
Decrease		300

Coastal Louisiana

Vinton	4,750	4,900
Lockport	5,400	5,600
Evangeline	1,250	1,400
Edgerly	1,700	2,000
Others	1,200	1,350
Total, Coastal Louisiana	14,300	15,250
Decrease		950
Total Gulf Coast	139,550	140,800
Decrease		1,250

ROCKY MOUNTAIN

Wyoming

Salt Creek	31,300	35,800
Grass Creek	2,650	2,600
Elk Basin	1,150	1,050
Big Muddy	2,950	3,000
Lost Soldier	2,750	2,650
Rock River	2,700	2,550
Lance Creek	700	650
Teapot Dome	450	1,200
Others	4,400	5,400
Total, Wyoming	49,050	54,900
Decrease		5,850

Montana

Cat Creek	2,000	2,050
Sunburst	11,500	11,500
Others	250	250
Total, Montana	13,750	13,800
Decrease		50

Colorado

Moffat (Craig)	1,650	1,650
Fort Collins	3,000	2,950
Florence	800	950
Others	1,250	1,300
Total, Colorado	6,700	6,850
Decrease		150

New Mexico

Table Mesa	450	50
Artesia	1,450	1,450
Hogback	250	250
Rattlesnake	350	100
Others	100	100
Total, N. Mexico	2,600	1,950
Increase		650
Total, Rocky Mountain	72,100	77,500
Decrease		5,400

CALIFORNIA

Santa Fe Springs	38,500	38,500
Long Beach	92,500	91,000
Hutington Beach	63,000	63,000
Torrance	20,500	20,500
Dominguez	15,000	15,000
Rosecrans	8,000	8,000
Inglewood	33,000	33,000
Midway-Sunset	84,000	84,000
Ventura Avenue	57,500	57,300
Seal Beach	66,000	70,000
Others	155,000	155,000
Total California	633,000	635,300
Decrease		2,300

EASTERN

(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	112,000	110,500
Increase		1,500

First Days of Proration, Little River Included, Brings Drop in Output

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, Oct. 8

AS THIS is written, a crowd outside the building is roaring its approval of something or other connected with the world series baseball games. What with the fight in Chicago, the International Petroleum Exposition and the baseball classic, few persons who do the heavy thinking on the trends of Mid-Continent production have had their minds entirely free to give to that subject. That may have something to do with the general lethargy that seems to have gripped the territory.

Proration, under the newest plan, became effective Oct. 6 and for the 24 hours ended that date there was a drop in production as compared with the day before. The entire district is being treated as a unit, with Little River included, the attempt is being made to hold the district to not more than 450,000 barrels daily. The second day's output after the new plan was put to working showed about the same figures as the preceding day. For the 24 hours ended Friday morning, Oct. 7, the total was 448,967 and for the 24 hours ended Saturday morning it was 448,140 barrels. The decrease on the day the plan was put into effect was 7,898 barrels.

During the week, Seminole district gained 35 wells and lost 13,540 barrels. The dates on which this reckoning is based are Sept. 30 and Oct. 7. Proration, as noted had something to do with the loss. In this period Little River gained 5 wells and 5,789 barrels; Bowlegs gained 16 wells and lost 8,440 barrels; Earlsboro added 13 wells and lost 5,468 barrels; Seminole proper gained 3 wells and lost 3,201 barrels and Searight gained 1 well and lost 2,220 barrels.

Among the new wells at Little River none were outstanding with respect to adding greatly to the producing area. The Blackwell Oil & Gas Co. got another well on its 80-acre tract in 35-8-6, good for 3,000 barrels, which topped the list. Several wells went dead during the week and were put on air lift, restoring them to sizeable production and there were several which at the end of the week were near failures.

Earlsboro continued to assist in holding up production, but there were no completions that would indicate an upward trend to the field. This field can be stimulated by shooting and, within the next two weeks, a number of wells will get small shots, as will a number in Bowlegs and the old Seminole pool.

This new proration agreement, which is embodied in an order made by the corporation commission, holds for 30 days. From the way things have been going in Little River, counted on as the chief contributor to a big gain in production, the umpire will be able to hold production to the agreed figure with one hand tied behind him. Little River isn't looking any too promising, either in geographical extent or in longevity of production there.

A modification in the policy of the Prairie Oil & Gas Co. in the Seminole district was reported during the week. The Prairie Pipe Line Co. has been handling around 75,000 barrels daily from the district, principally tendered by the Prairie Oil & Gas Co. The latter, it is reported, will ship less oil for a time and will store a greater amount of its own production and reduce its own shipments to around 50,000 barrels daily. Its own production is being reduced in accordance with the proration plan. The Prairie Pipe Line Co. will have available more room for tender shipments by other companies.

By the first of the year, the drilling campaign in all fields of the Seminole district will be drawing to a close, unless something new crops out to bring about another rush. The greater part of the work in Earlsboro and Bowlegs is at the point where drilling will be completed within a few weeks and not much new work is being started. The original Seminole field and Searight are, of course, at the point where they are not considered in the discussion. The following table of operations shows the status of the drilling:

Pool	Loc.	Rigs	S. D.	Less than 2000'	2000 to 3099'	3100 to 3700'	Below 3700'	Total Operations
Little River	4	12	9	7	10	29	38	100
Seminole (9-6)	1	....	2	0	3	1	15	20
Searight	2	2	1	2	3	6	13	28
Bowlegs	4	9	11	4	7	17	68	109
Earlsboro	6	4	9	7	18	32	86	153
Total	17	27	32	20	41	85	220	410

This was a decrease of 30 operations over the preceding week.

The outer edges of everything except the Little River pool are now considered to have been found and the inside drilling that starts from now on will be negligible. There are several areas where wells have reached the sand or have found evidence to warrant the belief they will open pools, but these are well in hand and, considering the lack of profits possible from more of the Seminole type of production at this market, the operators will be in no hurry about bringing them in. Five such areas were mentioned in the resolution passed by the operators which brought about the present plan of prorating. These are:

Barnsdall Oil & Gas Co., 22-7N-6E; Gypsy Oil Co., 33-8N-6E; Indian Territory Illuminating Oil Co., 16-8N-5E;

Drilling Operations in Oklahoma, Kansas and Texas, Week Ended October 8, 1927

	October 8 Week Ended					October 1				
	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	..	2	10	9	21	..	2	9	9	20
Other Osage	6	7	12	5	30	4	8	13	3	28
Bristow-Cushing	4	3	32	8	47	4	8	29	6	47
North Oklahoma	9	9	54	43	115	9	7	64	38	118
South Oklahoma	1	11	60	18	90	7	17	108	44	176
Muskogee	..	4	24	25	53	..	4	41	10	55
Okmulgee-Bristow	8	41	55	22	126	7	43	60	17	126
Tonkawa	..	..	4	1	5	..	..	4	1	5
Seminole District	21	18	440	38	517	23	24	466	40	553
Total Oklahoma	49	95	691	169	1,004	54	113	794	168	1,129
KANSAS	24	45	112	64	245	27	50	116	64	257
TEXAS										
Central	..	72	197	149	418	..	91	201	148	440
Panhandle	..	88	96	90	274	..	82	102	93	277
N. Central	..	36	83	33	152	..	38	84	32	154
West	..	110	160	112	382	..	108	172	108	388
Laredo	..	1	25	19	45	..	1	25	19	45
Total Texas	..	307	561	403	1,271	..	320	584	400	1,304
GRAND TOTAL	73	447	1,364	636	2,520	81	483	1,494	632	2,690

Seminole District Production by Companies and Leases, October 7 and September 30, 1927

Company	Farm	S. T. R.	October 7th No. Wells	October 7th Prod.	September 30 No. Wells	September 30 Prod.
BOWLEGS						
Amerada	Rascoe	15- 8-6	8	5,030	8	5,440
Atlantic	Baker	1- 8-6	4	1,776	4	1,955
Atlantic	Fleet	23- 8-6	4	1,447	4	1,312
Atlantic	Grayson	12- 8-6	2	2,260	2	2,247
Atlantic	A. Jones	16- 8-6	3	145	3	140
Atlantic	C. Jones	9- 8-6	1	1,071	1	1,179
Total Atlantic			14	5,679	14	6,833
Barnsdall	McNac	28- 8-6	1	45	1	50
Barnsdall	Murrow	11- 8-6	4	1,492	4	1,869
Total Barnsdall			5	1,537	5	1,919
Carter	Bowlegs	15- 8-6	3	1,950	3	2,140
Carter	Burden	23- 8-6	2	460	1	445
Carter	Jones	11- 8-6	1	2,195	1	2,295
Carter	Harjoche	15- 8-6	6	1,805	6	1,990
Carter	Hilly	23- 8-6	1	1,345	1	1,455
Carter	McGeisey	15- 8-6	1	0	1	0
Carter	Walker	15- 8-6	2	845	2	925
Carter	Wise	23- 8-6	12	9,415	11	8,920
Total Carter			28	18,015	27	18,170
Empire	Lacey	15- 8-6	6	1,210	6	1,333
Empire	Wise	23- 8-6	2	1,937	2	2,032
Total Empire			8	3,147	8	3,365
Gypsy	Bowlegs	22- 8-6	1	475	1	535
Gypsy	Brown	33- 8-6	1	97	1	100
Gypsy	Cumsey	8- 8-6	4	1,610	4	1,530
Gypsy	Grayson	13- 8-6	4	2,460	2	2,472
Gypsy	Walker	15- 8-6	8	3,720	8	3,914
Gypsy	Wise	23- 8-6	3	127	3	397
Total Gypsy			21	8,469	19	5,948
Indep. et al	Coker	21- 8-6	1	348	1	366
I. T. I. O.	Barnett	24- 8-6	2	1,001	2	1,167
I. T. I. O.	Billington	22- 8-6	4	1,490	3	1,356
I. T. I. O.	Bowlegs	22- 8-6	11	2,938	8	3,373
I. T. I. O.	Davis	13- 8-6	4	2,082	3	2,442
I. T. I. O.	Fay	18- 8-6	4	3,361	4	3,717
I. T. I. O.	Goforth	15- 8-6	11	2,841	10	3,126
I. T. I. O.	Livingston	15- 8-6	11	8,371	11	8,707
I. T. I. O.	Lizzie	11- 8-6	2	667	2	699
I. T. I. O.	Walker	15- 8-6	8	1,766	8	1,991
I. T. I. O.	Wilmont	15- 8-6	4	2,254	4	2,378
I. T. I. O.	Work	24- 8-6	1	307	1	430
I. T. I. O.	Youngblood	23- 8-6	4	726	4	802
I. T. I. O.	Hull		1	30	0	0
Total I. T. I. O.			65	27,834	60	30,188
McCulloch	Bowlegs	22- 8-6	4	270	4	112
Magnolia	Hammond		2	30	0	0
Mid-Continent	Baker	10- 8-6	4	3,577	4	3,980
Mid-Continent	Bowlegs	22- 8-6	1	789	1	855
Mid-Continent	Hutke	24- 8-6	1	0	1	5
Total Mid-Continent			6	4,366	6	4,840
Minnehoma	Bowlegs	15- 8-6	4	763	4	860
Prairie	Gahagan	23- 8-6	4	1,105	4	1,175
Prairie	Harber	10- 8-6	7	3,600	7	3,950
Prairie	Templeton	12- 8-6	1	2,575	1	2,950
Prairie	Jones	11- 8-6	1	1,530	1	1,345
Prairie	Whitney	23- 8-6	4	475	4	210
Total Prairie			17	9,285	17	9,530
Pure	Reed	14- 8-6	16	9,345	16	9,902
Pure	D. Strother	14- 8-6	2	1,105	2	1,142
Pure	E. Strother	16- 8-6	1	0	1	5
Pure	F. Strother	10- 8-6	1	626	2	636
Total Pure			20	11,076	21	11,685
Roxana et al	Taylor	16- 8-6	6	2,579	6	2,421
Shaffer	Lacey	14- 8-6	3	905	3	910
Sinclair	Adam	22- 8-6	1	0	1	0
Sinclair	Bowlegs	22- 8-6	1	125	0	0
Sinclair	Cumsey	10- 8-6	2	3,790	2	4,192
Sinclair	Harjo	14- 8-6	3	1,765	3	2,080
Sinclair	Jones	8- 8-6	4	6,750	4	7,675
Sinclair	Taylor	10- 8-6	4	3,955	4	4,565
Sinclair	Walker	22- 8-6	4	0,745	4	2,090
Sinclair	Ellen		6	3,455	0	0
Total Sinclair			25	21,585	18	20,602
Texas	Reed	14- 8-6	8	6,760	8	7,175
Tidal	Grayson	13- 8-6	3	1,340	3	1,295
Tidal	Harjoche	10- 8-6	4	2,405	4	2,375
Total Tidal			7	3,745	7	3,670
Twin State	Jones	11- 8-6	1	907	1	945
TOTAL BOWLEGS			255	133,354	239	141,794
LITTLE RIVER						
Amerada	Nitey	35- 8-6	0	0	1	1,875
Amerada	Fore		1	1,355	0	0
Blackwell	Nitey	35- 8-6	4	12,395	4	10,133
Gypsy	Pottery	35- 8-6	1	1,562	1	1,278
Gypsy	Campbell	36- 8-6	1	1,575	1	385
Total Gypsy			2	3,137	2	1,663
I. T. I. O.	Dungan	35- 8-6	2	2,895	1	1,824
I. T. I. O.	House WE	1- 7-6	1	2,120	1	2,275
I. T. I. O.	House MA	1- 7-6	1	725	1	2,021
I. T. I. O.	Jackson	1- 7-6	1	3,798	1	2,286
I. T. I. O.	Nitey	2- 7-6	2	8,462	2	5,692
I. T. I. O.	Reed	1- 7-6	1	159	1	1,276
I. T. I. O.	Soketneche		1	537	0	0
Total I. T. I. O.			9	18,696	7	15,374
Mid-Continent	Wadsworth	36- 8-6	3	1,915	3	2,990
P & R	Dungan	35- 8-6	1	180	1	1,130
P & R	House		1	75	0	0
Total P & R			2	255	0	0
Superior	Wadsworth		1	220	0	0
Tidal	Johnson		1	990	0	0
TOTAL LITTLE RIVER			23	38,955	18	33,166
EARLSBORO						
Amerada	Anderson	15- 8-6	4	2,955	4	3,170
Amerada	Cowden	4- 9-5	6	1,860	5	2,125
Amerada	Rodgers	3- 9-5	2	3,720	2	4,675
Total Amerada			12	5,580	11	9,970
Barnsdall	Brown	10- 9-5	3	3,030	3	3,030
Barnsdall	Bruner-N.	10- 9-5	1	2,256	1	2,850
Barnsdall	C. Cudjo	11- 9-5	1	32	1	27
Barnsdall	D. Davis	11- 9-5	3	2,264	3	2,477
Barnsdall	J. Davis	11- 9-5	2	244	2	252
Barnsdall	M. Davis	11- 9-5	3	1,739	3	2,251
Barnsdall	Gibson	9- 9-5	6	2,409	6	2,307
Barsndall	Hearn	15- 9-5	1	18	1	22
Barnsdall	Hooly	4- 9-5	1	0	1	11
Barnsdall	Ingram	4- 9-5	2	2,666	2	2,150
Barnsdall	Pack	10- 9-5	4	1,249	4	1,256
Barnsdall	Peter	10- 9-5	4	696	4	423
Barnsdall	Sebolka	15- 9-5	1	2,569	1	2,624
Barnsdall	Sango	2- 9-5	1	130	1	134
Barnsdall	Smith	15- 9-5	1	0	1	6
Barnsdall	Sullivan	11- 9-5	2	1,620	2	1,586
Barnsdall	Sullivan	10- 9-5	2	67	2	66
Barnsdall	Watsutke	12- 9-5	3	2,989	3	3,179
Total Barnsdall			45	23,978	41	24,652
Carter	Payne	12- 9-5	2	2,025	2	2,430
Carter	Sango	2- 9-5	2	410	2	365
Carter	Davis		1	905	0	0
Total Carter			5	3,340	4	2,795
Continental	Spencer	12- 9-5	4	15,140	3	8,420
Crosbie	Bryant	9- 9-5	2	2,565	2	2,010
Empire	Edmundson	3- 9-5	3	5,648	3	4,197
Gypsy	Bora				2	0
Gypsy	Bruner	10- 9-5	4	5,717	3	4,757
Gypsy	Carter	11- 9-5	6	3,865	6	3,505
Gypsy	Hunick		1	375		
Gypsy	McFarland	9- 9-5	2		2	0
Gypsy	Noble	12- 9-5	3	6,575	3	9,802
Gypsy	Peter	10- 9-5	6	1,235	4	1,360
Gypsy	Sango		1	17		
Gypsy	State	16- 9-5	4	552	4	145
Gypsy	Strain	17- 9-5	1	...	1	0
Total Gypsy			29	18,318	25	19,569
Independent	Bruner	10- 9-5	4	7,330	4	12,500
Independent	Gaines	11- 9-5	3	10,315	2	10,625
Independent	Knappen	8- 8-5	4	2,380	3	1,795
Independent	O'Dell	4- 9-5	4	2,110	4	2,750
Independent	Sullivan	10- 9-5	4	2,471	4	4,044
Total Independent			19	24,606	17	29,919
Interocean	Payne	12- 9-5	1	...	1	0
Magnolia	Bryant	9- 9-5	4	1,622	4	1,785
Magnolia	Cowden	4- 9-5	2	572	2	602
Magnolia	Edmundson	3- 9-5	2	1,406	2	1,552
Magnolia	Holmsley	11- 9-5	5	6,151	5	6,515
Magnolia	Ingram	10- 9-5	1	35	1	52
Magnolia	Lena	10- 9-5	3	333	3	189
Magnolia	Seay	12- 9-5	5	1,969	4	1,723
Magnolia	Simpson	10- 9-5	4	723	4	945
Magnolia	Sparks	11- 9-5	7	5,451	6	4,519
Magnolia	Sullivan		2	120		
Total Magnolia			35	18,382	31	17,882
Mid-Continent	McCumber	9- 9-5	7	1,810	7	1,965
Mid-Kansas	Anderson	14- 9-5	2	235	1	0
Phillips	Dunnaway	15- 9-5	1	32	1	35
Phillips	Graham	9- 9-5	6	1,102	6	1,279
Total Phillips			7	1,134	7	1,314
Prairie	Baker	23- 9-5	1	50	1	0
Prairie	Davis	13- 9-5	3	1,740	3	2,170
Prairie	C. Graham	3- 9-5	2	2,700	2	3,250
Prairie	O. Graham	10- 9-5	4	5,830	4	6,665
Prairie	Stidham	11- 9-5	9	8,245	9	12,485
Total Prairie			19	18,567	19	24,570
Roxana	Hearn	13- 9-5	1	10	1	317
Roxana	Bayliss	17- 9-5	1	17	1	7
Roxana	Spencer	12- 9-5	2	2,768	2	3,890
Total Roxana			4	2,795	4	4,214
Sinclair	Foreman	18- 9-5	1	15	1	17
Sinclair	Hollins	12- 9-5	3	4,090	3	2,675
Total Sinclair			4	4,105	4	2,692
Skelly	Spencer	12- 9-5	2	10,404	2	12,480
Total Skelly					3	12,580
Texas	Anderson	2- 9-5	1	85	1	100
Texas	Brown	10- 9-5	4	2,100	4	2,560
Texas	Rodgers	5- 9-5	1	6,445	1	7,405
Texas	Wilmont	10- 9-5	4	240	4	240
Total Texas			10	8,870	10	10,305
Tidal	Watkins	9- 9-5	4	2,280	4	1,745
Twin State	Baker	12- 9-5	3	8,122	1	1,635
Twin State	Hearn	2- 9-5	1	1,760	1	1,850
Total Twin State			4	9,882	2	3,485
TOTAL EARLSBORO			216	178,592	203	184,060
TOTAL LITTLE RIVER			23	38,955	18	33,166
TOTAL SEARIGHT			59	29,566	58	31,786
TOTAL BOWLEGS			255	133,354	239	141,794
TOTAL SEMINOLE PROPER			326	68,500	323	71,701
GRAND TOTAL SEMINOLE DISTRICT			879	448,967	844	462,507

Completions in N.E. Central, West, Panhandle and North Texas, Week Ended October 8, 1927

NORTH AND EAST TEXAS

Brown County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Thomas et al	1-Lee	BBB&C	2890-2930	20
Gilmore et al	17-Teston	Smith	1233-1256	60
Cranfill et al	11-Smith	SA&MG	1328-1336	25
Hughes	1-Gilberth	SA&MG	1334-1351	400
Humble	1-Gilbreth	SA&MG	1314-1330	330
Roxana	18-Smith	SA&MG	1314-1342	106
Roxana	19-Smith	SA&MG	1333-1349	144
Roxana	23-Smith	SA&MG	1313-1333	110
Sinclair	5-Smith	SA&MG	1325-1335	200
Smith	7-Smith	SA&MG	1320-1342	350
Humble	3-Byler	T&NO	1325-1338	144
National Gas & Fuel	2-Newton	Hunt	1540-1565	1.25M
Humble	13-Foster	Benson	T.D. 1184	Dry
Deauvaux	1-Giddings	Celland	T.D. 1601	Dry

Callahan County

Bradstreet	2-Swafford	Vigal	T.D. 1735	Dry
Shadbolt et al	1-Manning	Boal	T.D. 1110	Dry
Stalker	1-Odem	Brown	T.D. 802	Dry
Bradstreet	1-Swafford	Vigal	1674-1704	150
Shaw-Ratke	10-Miller	SL	1642-1648	60

Coleman County

Senior	1-Haynes	Young	854-1410	Dry

Eastland County

Texas	18-Hightower	Van Norman	T.D. 1216	Dry
Chesnut-Smith	1-Martin	Richardson	T.D. 3586	Dry
Root et al	1-Pelfry	H&TC	T.D. 4090	Dry
Gulf Prod.	8-Parson	McLenna	1588-1592	238
Adams	1-McClelland	SP	3864-3909	15&5M

Limestone County

Rycade	1-Ward	Varella	T.D. 2899	Dry
Pandem	1-Bassett	Walker	T.D. 6046	Dry

Shackelford County

Overlease	1-Smalley	ET	T.D. 1512	Dry

Throckmorton County

Humble	1-Langford	TE&L	T.D. 4115	Dry
Roeser et al	1-Mathews		T.D. 2006	Dry

NORTH TEXAS

Archer County

Koltex	3-White	ATNC	1450-1451	25
Maer et al	17-Wilson	DLC	1540-1544	13
O'Neal	1-Wilson	Horritz	T.D. 1375	Dry
Perkins et al	4-Tuberville	Cassidy	T.D. 1554	Dry
Perkins et al	1-Anderson	SAR	T.D. 1447	Dry
Consolidated	1-Norred	BBB&C	T.D. 1351	Dry

Cooke County

Neff et al	1-Eskers	MT	T.D. 1726	Dry
Oil Operators Trust	1-Hofbauer	Barnett	T.D. 2138	Dry
Abernathy et al	2-Dayton	Godley	T.D. 1908	Dry
Bell	3-Lynch	Scott	1688-1689	60
Carey et al	1-Walterschied	M&T	1382-1752	35
Stahl et al	4-Koelzer	Scott	1632-1660	Dry
The Sun Co.	5-Hacker	Scott	1660-1677	48

Foard County

Humble	1-McAdams	SP	T.D. 4192	Dry

Knox County

Texas	1-Teague	H&TC	T.D. 3705	Dry

Montague County

Company	Well Farm	Location Survey	Depth	Init. Prod.
Continental	1-Loy	Donoho	T.D. 915	Dry

Wichita County

Sheldon	6-Frankle	Waggoner	1657-1664	60
Texas	331-Waggoner	Meade	1985-1991	31
Vaughn et al	1-Ancel	HEL	1714-1716	150
Jackson	2-Nitsche	DCSL	741-743	30

Wilbarger County

Waggoner	3-Waggoner	H&TC	2362-2370	40
Milham	14-Waggoner	H&TC	2542-2549	31

Wise County

Winmiller	1-Beall	Worthington	T.D. 2512	Dry

Young County

Roberts	1-Allen	TE&L	T.D. 785	Dry
Gifford	1-Rutherford	TE&L	T.D. 840	Dry
Camp	1-Peters	I&GN	747-763	4

PANHANDLE

Carson County

Empire	10-Burnett	I&GN	2630-2642	23M
Empire	9-Burnett	I&GN	2285-2438	27M
Empire	3-Burnett	I&GN	2390-2670	18M
Empire	2-Burnett	I&GN	2440-2697	20M

Gray County

Magnolia	1-Archer	I&GN	3265-3272	820
Pampa	1-Leopold	I&GN	T.D. 3600	Dry
Magnolia	1-Heithhold	I&GN	3363-3170	22
Empire	1-Hughey	I&GN	3120-3225	45
Roxana	4-Worley	I&GN	2950-3090	61
Wilcox	2-Worley et al	I&GN	2975-3050	77
Midwest	1-Hood	I&GN	2953-2987	180
Pollard et al	1-Bowers	H&GN	2953-2995	165

Hutchinson County

McElroy et al	2-Cockrell	D&S	3098-3108	80M

Wheeler County

Vaughn et al	1-Cuddeback	H&GN	1850-1910	73M
Lyons et al	1-Johnson	H&GN	2290-2311	100

WEST TEXAS

Crane County

Pecos	10-Univ.	Univ.	2775-3020	150
Tidal	8-Univ.	Univ.	2833-2940	650
Gulf	39-McElroy	CCSD	2772-2930	1080

Garza County

Emerald	1-Boren	H&GN	T.D. 2600	Dry

Glasscock County

California	1-Currie	W&NW	T.D. 2523	Dry

Howard County

Magnolia	6-Chalk-K	W&NW	1640-1666	88
Magnolia	5-Chalk-S	W&NW	1570-1600	60

Mitchell County

Thraves	1-Sanders	T&P	T.D. 3246	Dry

Pecos County

Simms	1-Smith	TC	1344-1385	150
Gulf Prod.	1-Smith	GC&SF	1304-1360	75

Stonewall County

Zock et al	1-Ward	H&TC	T.D. 3000	Dry

Gypsy Oil Co., 5-8N-6E; Prairie Oil & Gas Co., 24-9N-5E. By resolution, these are to be held in their present condition.

While at the task of noting a little lifting of the cloud of gloom that hung over the Seminole area, it is pertinent to speak of the status of the 36 wildcats pointed out by the umpire and his advisory committee several weeks ago. These were set forth as critical tests. Since that time, 22 have been completed. Three are oil wells, 2 gas wells, 17 are dry and 14 drilling or shut down. Locations and status are as follows:

Prairie Oil & Gas Co., SW NE 30-1ON-6E, dry and abandoned, total depth 4582 feet.

Prairie Oil & Gas Co., SE NE NE 22-1ON-6E, production 20 barrels, T. D., 4260 feet.

Continental Oil Co., SW NW SW 28-1ON-7E, 5-inch set at 4623 feet.

Wilcox Oil & Gas Co., SE SW 32-11N-2E, fishing 3859 feet.

Ramsey Brothers, SW SE 9-4N-5E, dry, total depth, 2880 feet, abandoned.

Prairie Oil & Gas Co., NE NW 31-8N-7E, dry and abandoned, 4365 feet.

T. B. Slick, Inc., SW SE 21-5N-6Em 1640 barrels initial from Hunton lime, in first seven hours, total depth 2693 feet. Now carried under name of Conservation Oil Co., set up by pooling of interests around well. This well is now pumping 250 barrels daily.

T. B. Slick, Inc., SE SW SW 1-6N-6E, hole full of water at 4156 feet and shut down.

Roxana Petroleum Corp., NW SW 22-7N-3E, hole full of water and shut down at 4945 feet.

Mid-Continent Petroleum Corp., NE SE NW 28-7N-6E, dry and abandoned at 4495 feet.

Gypsy Oil Co., NE NE 20-7N-7E, dry and abandoned at 4737 feet.

Empire Gas & Fuel Co., SW NE SE 7-8N-7E, dry and abandoned at 4339 feet.

Magnolia Petroleum Co., SE NE 9-8N-8E, dry and abandoned at 4460 feet.

McCulloch, NE SW 2-9N-2E, 8-inch set at 4254 feet.

Holm & Jarvis, SE NE NE kk-9N-7E, dry and abandoned at 4585 feet.

Gypsy Oil Co., SW SE SE 21-9N-7E, dry and abandoned at 3384 feet.

Indian Territory Illuminating Oil Co., SW NE 31-9N-7E, dry and abandoned at 4465 feet.

Central Commercial Oil Co., SW SW 28-1ON-4Em lost hole at 3157 feet.

Burford et al., NW NW 14-1ON-5E, dry and abandoned at 4901 feet.

R. F. Garland, SW NW SW 10-4N-3E, shut down at 2100 feet.

L. A. Gillespie, SW SE 12-5N-4E, hole full of water at 2736 feet.

Wiser Oil Co., SW NW 25-6N-1E, dry and abandoned at 4515 feet.

Carter Oil Co., NW NE NW 18-6N-8E, old well deepened, drilling at 3358 feet.

Indian Territory Illuminating Oil Co., NE corner 9-7N-6E, dry and abandoned at 4537 feet.

Independent Oil & Gas Co., SE SW 30-7N-6E, dry and abandoned at 4570 feet.

Indian Territory Illuminating Oil Co., NW SW 32-7N-7E, drilling at 3685 feet.

Wentz et al., SW NW NE 21-8N-7Em dry and abandoned at 4382 feet.

Completions in Oklahoma and Kansas, Week Ended October 8, 1927

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	1	SEc NW SE 14-1-3 W	T.D. 3830	Dry
Magnolia	8	NWc NE 26-2-3 W	T.D. 5122	Dry

Creek County

Texas	1	NWc NE NW 20-18-9 E	T.D. 3065	Dry
Devonian	4	CSL SE NE 5-16-11 E	T.D. 1907 OWD	Dry
Olean	2	SEc NW NE SW 13-17-8 E	2273-2297	100
Dixie	5	SWc SW SW SW 5-17-10 E	2960-3015	50
Pontiac	8	NEc NW SW 13-17-10 E	2460-2494	500
Texas	1	NEc SE 14-17-10 E	1884-1929	55
Skelly	2	SWc SE NW 32-17-10 E	2693-2713	35

Garfield County

Sinclair	3	CNL NW SE 26-22-4 W	T.D. 2560	Dry

Hughes County

Berry	5	C NW SE 4-9-9 E	T.D. 4275	Dry
Burke-Greis	1	NEc NW NE 15-8-9 E	T.D. 3450	Dry
Roxana	2	SEc NW 28-7-8 E	T.D. 1702	Dry

Kay County

Balph et al	1	C NE NW 29-27-1 W	T.D. 3623	Dry
Boucher et al	1	NEc NW NE 34-25-2 E	T.D. 4454	Dry
Sinclair	1	SEc NW 19-27-1 W	3500-3510 OWD	.68M
Larutan	3	NEc NW 30-27-1 W	723-740	1M

Muskogee County

Sunray	8	NWc SW 5-14-19 E	712-733	75
Henigman	1	CSL NW SE 1-14-18 E	T.D. 929	Dry

Okfuskee County

Josey	1	SWc 28-12-11 E	T.D. 3985	Dry

Okmulgee County

Misner	3	CSL SW NE 10-15-14 E	984-1000	20

Osage County

I. T. I. O.	379	NWc NE NE 17-27-11 E	723-758	2M
I. T. I. O.	375	NWc NE NW 3-26-11 E	1779-1814	2M
I. T. I. O.	218	SWc SE SE 11-26-11 E	T.D. 2258 OWD	Dry
Plains	1	NEc SW SE 34-24-10 E	T.D. 1279	Dry

Pottawatomie County

Barnsdall	2	SWc NW SE 4-9-5 E	4320-4327	13
Magnolia	1	SEc NE 24-7-3 E	3765-3826	29

Seminole County

Pure	1	SEc SW 33-11-8 E	4097-4150	125
Nowata	3	SEc NW NE 3-10-8 E	3431-3444 OWD	5
Barnsdall	1	SWc NW SW 1-9-5 E	4412-4426	1909
Barnsdall	4	SEc NE NW 10-9-5 E	4419-4433	1325
Magnolia	2	SEc NW SE 10-9-5 E	3510-3570 OWD	250
Texas	3	NWc SW NW 10-9-5 E	4443-4458	35
Barnsdall	1	NWc SE 11-9-5 E	4385-4395	26
Gypsy	7	NWc 11-9-5 E	4250-4277	2460
Barnsdall	3	SEc NE SW 12-9-5 E	4342-4357	1308
Continental	3	NWc SE NW 12-9-5 E	4230-4258	1750
Empire	1	SWc SE NE 12-9-5 E	4407-4410	60
Gypsy	2	SEc NW NE 12-9-5 E	4318-4340	7052
Carter	1	NEc NW SW 3-9-6 E	4347-4357	35
Sinclair	3	SEc SW NW 3-9-6 E	4643-4648	910
Wilcox	6	SEc NE NW 4-9-6 E	4423-4461	197
Gypsy	1	SEc NE SE 10-8-6 E	4115-4145	617
Tidal	6	NWc NE SW 10-8-6 E	4016-4171	245
Carter	1	NWc SE SE 11-8-6 E	4110-4130	2585
I. T. I. O.	2	SEc SW NW 11-8-6 E	4228-4238	336
Atlantic	3	NEc SW NW 13-8-6 E	4238-4254	235
I. T. I. O.	6	NWc SE NW 13-8-6 E	4148-4184	1174
Pure	15	NWc NE SW 14-8-6 E	4311-4314	15
Pure	19	NEc NW SE 14-8-6 E	4246-4266	288
I. T. I. O.	9	NEc SE NE 15-8-6 E	4055-5090	436
I. T. I. O.	3	SEc NW 22-8-6 E	4320-4334	1120
Carter	4	NEc NW SE 23-8-6 E	4437-4462	480
Empire	4	SWc SE NW 23-8-6 E	4325-4343	255
P & R	1	SEc NW SE 35-8-6 E	4174-4182	3045
Prairie	3	SEc NW SE 11-8-6 E	4052-4070	1140
Empire	6	SEc NE SW 3-9-5 E	T.D. 4432	Dry
Roxana	1	NWc NE SE 25-9-6 E	T.D. 4273	Dry
Phillips	5	NEc NW SE 27-9-6 E	T.D. 4015	Dry
Gypsy	1	NWc NE NW 36-9-6 E	T.D. 4365	Dry
Gypsy	2	SWc NE NW 36-9-6 E	T.D. 4258	Dry
Magnolia	1	NWc SE NE 22-8-8 E	T.D. 4221	Dry

Stephens County

McBride et al	1	SEc SW NW 2-1-4 W	T.D. 3528 OWD	Dry

Wagoner County

McDougal	1	SEc NW NW 21-17-15 E	1715-1720	2M
Williams	4	NEc SW NE NE 12-18-17 E	T.D. 282	Dry

KANSAS

Butler County

Liggett et al	3	SEc NW 36-27-6 E	T.D. 2837	Dry
Mid-Kansas	1	NEc NW NE 4-28-6 E	T.D. 3096	Dry

Chase County

Phillips	1	C NW SE 36-18-6 E	T.D. 1793	Dry

Cowley County

Shawver et al	1	C NW SE 19-34-3 E	T.D. 1596	Dry
Mission	1	Lot 10 Blk 43	2300-2334	100
Milligan et al	1	NWc SE 6-32-5 E	2325-2342	100
Carter	1	SEc SW NE 17-34-3 E	3387-3400	50

Pratt County

Elliott et al	1	NWc SW 32-27-13 W	T.D. 1055	Dry

Russell County

Mid-West	6	NWc SE 5-14-15 W	3043-3089	50

Seward County

Wilson et al	1	NEc 14-33-33 W	T.D. 700	Dry

Sumner County

Roxana	2	Lot 13 Blk. 39	2062-2135	600

Completions in North Louisiana and Arkansas, Week Ended October 8, 1927

Company	Well	Location	Depth	Yield
Louisiana—Cartersville—Bossier Parish				
Simms Oil Co.	Dodson No. 1	15-23-12	3086	43M gas
Woodley & Collins	J. S. Farrington No. 1	23-23-12	3106	salt water, aband.
Caddo Parish—Caddo District				
Magnolia Pet. Co.	Raines No. 26	22-21-15	2845	100 bbls. 4M gas
Standard Oil Col of La.	Stiles No. 179	33-21-16	1838	75 bbls.
Richland Parish				
Moody & Seagraves	McCoy No. 1	32-16-6E	2433	20M gas
Ruston Drilling Co.	McCoy No. 2	8-16-6E	2425	52M gas
Gulf Refining Co.	Marshfield No. 2	29-17-6E	2447	65M gas
Urania—LaSalle Parish				
Shreveport Oil Corp.	Morrow No. 1	26-10-1E	1600	dry, aband.
Zoder et al	Urania No. 5	7-10-2E	1521	150 bbls.
Waskome—East Texas—Harrison Co.				
Cox et al	Clark No. 1	HRS	972	5M gas
Tylong O. & G. Co.	J. Lipscomb Cook No. 2 R. W. Bedford	HRS	1945	10M gas
Arkansas—Nevada County				
O'Brien et al	William Haynie B-3	1-14-21	1163	100 bbls.
O'Brien et al	Moss B-5	1-14-21	1162	125 bbls.
Autrey Oil Co.	Martin C-2	6-14-20	1192	50 bbls.

Company	Well	Location	Depth	Yield
Smackover				
Skelly Oil Co.	Roper No. 12	3-16-15	2376	100 bbls.
Smitherman & McDonald	C. L. Saxon B-5	5-16-16	2534	30 bbls.
Calion				
Magnolia Pet. Co.	Carroll No. 1	1-17-14	2982	300 bbls. 20M gas

Daily average production for the week by districts follows (barrels):

Louisiana		Arkansas	
Caddo, light	13,250	El Dorado	5,697
Caddo, heavy	4,701	Smackover, light	9,801
Red River-Desoto-Sabine	5,695	Smackover, heavy	81,291
Homer	4,590	Lisbon	2,950
Haynesville	6,840	Stephens	1,290
Cotton Valley	5,518	Nevada County	2,670
Bellevue	1,105		
Urania	8,105		
Little Creek	805		
Total Louisiana	50,609	Total Arkansas	103,699

TOTAL BOTH STATES 154,308 barrels.

Magnolia Petroleum Co., SE SE 31-8N-7E, 15 million gas from Cromwell sand, total depth 3201 feet.

Independent Oil & Gas Co., SE NW NW 14-8N-9E, 160 barrels oil initial from No. 1 well, total depth 2997 feet, Cromwell sand. No. 2 well, same section, dry and abandoned at 3900 feet.

Independent Oil & Gas Co., NE NE 32-9N-5E, drilling at 4093 feet.

Barnsdall Oil & Gas Co., NW NE SW 7-9N-7E, 4 million feet gas from Cromwell sand, total depth 3587 feet.

Barnsdall Oil & Gas Co., SE SW SE 29-9N-7E, dry and abandoned at 4451 feet.

Sykes et al., center SE SE 12-10N-3E, drilling at 4050 feet.

F. Davis et al., NE SW 16-10N-5E, set 8-inch at 3836 feet.

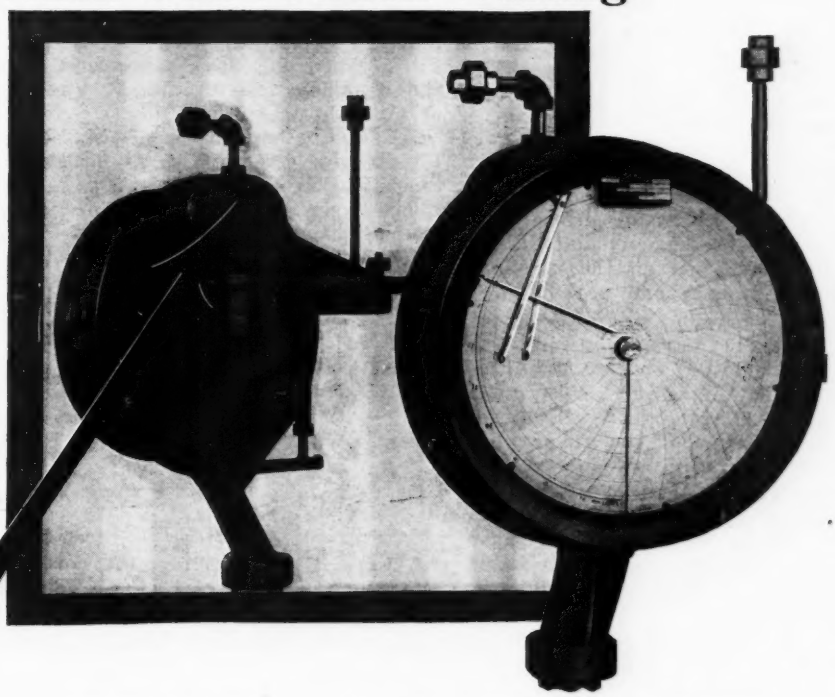
Tidal Oil Co., SE SW SE 26-10N-5Em set 5-inch at 4464 feet.

In the Texas Panhandle, Gray county had the feature completion of the week. Delaney, Ward and others, brought in their No. 1 Jackson in the Bowers pool, NW NE SW of Sec. 88, Block B-2, H. & G. N. Survey, for 6144 barrels the 24 hours ended the morning of Oct. 2. It stopped flowing the night of Oct. 3, was worked over and came back for 210 barrels per hour. The Sinclair Pipe Line Co. is running the oil. This well got the top of the pay at 2844 feet and found the big production at 2980-84 feet. It is a half mile extension to the pool.

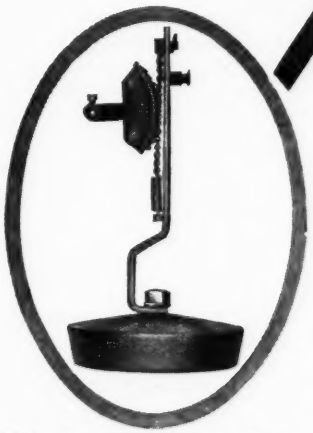
In the same area and nearly a half mile north Danciger and others brought in their No. 1 Jackson in the northwest of Sec. 88 for an initial of 450 barrels the first 24 hours. Late in the week it was making 70 barrels per hour on the swab. The hole is bottomed at 3002 feet.

UNIFORM MULTIPLICATION

Here's the Orifice Meter For Which You've Been Waiting



It has No Inherent Error



This is the segmental lever and float which translates the uniform float motion into a uniform pen travel. Regardless of the position of the float, the pen arm multiplies the movement of the float **UNIFORMLY** throughout the entire scale of the chart. This relationship is constant.

OIL and Gas men have been quick to install the new Foxboro Orifice Meter, because:

It is only common sense to buy a meter which has *No Inherent Error*.

Assemble this meter with your own hands. It is a marvel of simplicity. The segmental lever actually eliminates the error.

A micrometer screw zeros the meter. A few drops of mercury makes no difference. Calibration is permanent. There's nothing to disturb accuracy.

Measure the 3¼ inch mercury float. There's nothing delicate about this meter. It's the most powerful float ever used in this type of instrument.

And the absolutely uniform chart scale! Get out the pencil and see what this means in terms of greater ease of interpolation.

The accuracy of this meter is the accuracy which has made all Foxboro Instruments famous.

Performance sells the Foxboro Orifice Meter. Try it out. You won't want to conduct your business with any other kind of Orifice Meter.

The Foxboro Co., Inc.

Neponset Avenue, Foxboro, Mass., U. S. A.

205 So. Cheyenne Avenue, Tulsa, Okla.

New York Chicago Boston Philadelphia Pittsburgh Cleveland Rochester Atlanta Los Angeles Detroit San Francisco Portland, Ore.

FOXBORO

REG. U. S. PAT. OFF.

THE COMPASS OF INDUSTRY

A NEW PRINCIPLE IN ORIFICE METER DESIGN

Use of Gas in Production, Is Topic At Engineers' Meeting

ADVANCES in production engineering which have been made since the last meeting of the Petroleum Division of the American Institute of Mining and Metallurgical Engineers in February, 1926, will be discussed at the meeting of this division Oct. 19 and 20 at the Texas Hotel, Fort Worth.

There will be one session on air-gas lift; one on gas-oil ratios; one on the use of electricity in oil field operations and one on the handling of congealing oils and paraffin.

John M. Lovejoy vice-president of the Amerada Petroleum Corp., is chairman of the air-gas lift program; J. B. Umpleby, president, Petroleum Reclamation Co., Bradford, Pa., is chairman of the air-gas lift and gas-oil ratio session; A. C. Rubel, petroleum engineer of the Union Oil Co., Los Angeles, is chairman of the session on use of electricity in oil field operations, and E. O. Bennett, chief production engineer, Marland Oil Co. of Texas, Fort Worth, is chairman of the session on handling congealing oils and paraffin.

Speakers and their subjects for the first session on air-gas lift are: J. O. Lewis, on "Principles Underlying the Air-Gas Lift"; R. R. Brandenthaler, "Effect of Gas Lift on Physical Properties of Oil"; R. D. Gibbs, "Handling Recirculated Gas"; E. V. Foran, "Mechanical Installations for Air-Gas Lift: Texas, Other Than the Gulf Coast", and L. L. Brundred, on "Gulf Coast"; R. W. Bond, "Oklahoma and Kansas, Others Than Seminole", and C. R. Swartz on "Seminole", and H. C. Miller on "California Practice".

Second sessions speakers on air-gas lift and gas-oil ratios are: S. F. Shaw, "Air-Gas Lift Practice in Seminole"; A. C. Rubel, "Air-Gas Lift Practice in California"; Lester C. Uren, "Existing Information on Gas-Oil Ratios"; E. O. Bennett, "Relation of Air-Gas Lift to Gas-Oil Ratios and the Bearing on Ultimate Production"; and F. W. Lake "Data from California".

During the third session, which will be devoted to papers on the use of electricity in oil fields, D. L. Johnson will discuss the use of electricity in the Mid-Continent and A. W. Peake and F. O. Prior on its use in Wyoming. L. J. Murphy will talk on "Relative Advantages and Cost of Electric Power in Lease Operation", which will be followed by a report of the committee chosen some time ago to evolve definitions for technical terms in production engineering.

Speakers at the fourth session, which will be on handling congealing oils and paraffin, are; C. E. Reistle, "Summary of Existing Information"; Frank Brewster, "Problems and Their Solution in the Appalachian Field"; F. E. Wood will discuss problems in the Wyoming field and W. V. Vietti, at Amarillo.

W. E. Wrather will present a brief review with forecasts of the production situation in this country.

The committee in charge of the meeting includes:

General chairman E. O. Bennett; vice chairman in charge of program, J. B. Umpleby; committee in charge of the technical program, A. C. Rubel and E. O. Bennett; committee on definition for technical terms, A. C. Rubel, Lester C. Uren, and A. W. Ambrose, manager of production, Empire Companies, Bartlesville, Okla.

Field trips will be arranged if a sufficient number wish them. Ladies' entertainment is in the hands of Mrs. E. O. Bennett.

A smoker will be held the evening of Oct. 19 at the Fort Worth Club, during which E. W. Marland, president of the Marland Oil Co., Ponca City, and chairman of the committee on the prevention of waste of gas of the American Petroleum Institute, will deliver an informal address.

Sessions will be in the ballroom of the Texas Hotel and luncheon will be served in the lobby outside the ballroom.

12,000-Barrel Well is 24th Yates Field Completion

HOUSTON, Oct. 7

ANOTHER big well in the northwestern part of the Yates shallow field, eastern Pecos county, will have to be taken into consideration in the second semi-monthly proration period beginning Oct. 15. It is the No. 1 Smith of the California Co., in the northeast corner of sec. 35, GC&SF block 194, which gauged 500 barrels the first hour, or at the rate of 12,000 barrels daily. The well, one foot in the second pay found at 1299 feet, was shut in until the new prorating period begins.

The California Co.'s allotment in the proration period from Oct. 1-15 is 1989 barrels from one well on its Yates lease, which guaged 477.36 barrels under the hourly test made at the end of September, or at the rate of 11.457 barrels daily.

Takings from Yates field properties include 22,940 barrels daily from properties of the Mid-Kansas Oil & Gas Co., and Transcontinental Oil Co., distributed as follows: 14,224 barrels from seven wells on the Yates "A" lease; 7,050 barrels from the three Yates "B" wells; 921 barrels from one Yates "C" well and 745 barrels from one Smith-Taylor well.

Other prorated quantities of crude are as follows: 1624 barrels from the A-1 Yates well of Marland Oil Co. of Texas; 289 barrels from the No. 1 Smith well of Gulf Production Co., and 80 barrels from its No. 1 Thompson; 483 barrels from the No. 1 Smith well of Simms Oil Co.; 2037 barrels from three Yates wells of the Marland-McMan partnership; 259 barrels from Roxana Petroleum Corp.'s No. 1 Tippet; 273 barrels from Humble Oil & Refining Co.'s No. 1 Smith and 16 barrels from the Allsman & Bell riverbed well now owned by the Crude Oil Purchasing Co. of America, which was recently formed by E. L. Smallwood and associates of New York and which paid approximately $125,000 for the riverbed properties purchased.

In the first 15 days proration period, the field is being exploited to a total quantity of 30,000 barrels daily from 23 wells. That quantity marks the total of the Humble Oil & Refining Co.'s allotment in its west Texas trunk pipelines to the Pecos county area. It is receiving 16,000 barrels of that total through its own Yates field-to-Kemper gathering system and 14,000 barrels through the Yates field-to-McCamey short pipelines of the Illinois Pipeline Co. When the Illinois completes its 14,000 barrel line from Yates field-to-Del Rio, in the latter part of October, facilities will be provided for the handling of 44,000 barrels out of the field daily in line with that phase of the proration agreement.

In the general proration period governing Yates field, the contract of Mid-Kansas to deliver 5,000 barrels daily to Humble Oil & Refining Co., which has been in effect for several months, will be suspended. This handling of the Mid-Kansas & Humble contract, thereby, puts all Yates field production on an equitable basis as regards outlets and other operating functions.

TULSA.—Lester Kiem, assistant general manager of the Oil Well Supply Co. of California, Los Angeles, was in Tulsa for the Petroleum Exposition.

Cracking Cycle Increased to Five Times Former Length at Oklahoma Refinery

By J. C. Chatfield

REFINERY engineers have predicted that the cracking plant of the future will be virtually a complete refinery, that the charging stock will be crude oil and the products gasoline and heavy fuel oil or coke. Their idea is that a separate skimming operation will be made unnecessary by more efficient use of the heat necessary for cracking to take off the natural gasoline content of the crude.

An interesting step in that direction has been made at the Blackwell plant of the Globe Oil & Refining Co., one of the first licensees of the Cross purpose. The Globe modification of the Cross process is a forerunner of some of the newest Cross plants, one of which was completed recently at the Fort Worth plant of the Texas Pacific Coal & Oil Co.

The Globe cracking installation consists of apparatus for the continuous preparation of cracking stock from reduced Mid-Continent crude and the cracking of the heavy gas oil produced. Ultimate products of the plant are end point gasoline and heavy fuel oil suitable for railroad use. All gas oil produced from the reduced crude as well as recycle stock from the reaction chamber is recharged to the plant so that there is no production of cracked gas oil withdrawn from the system for sale as such.

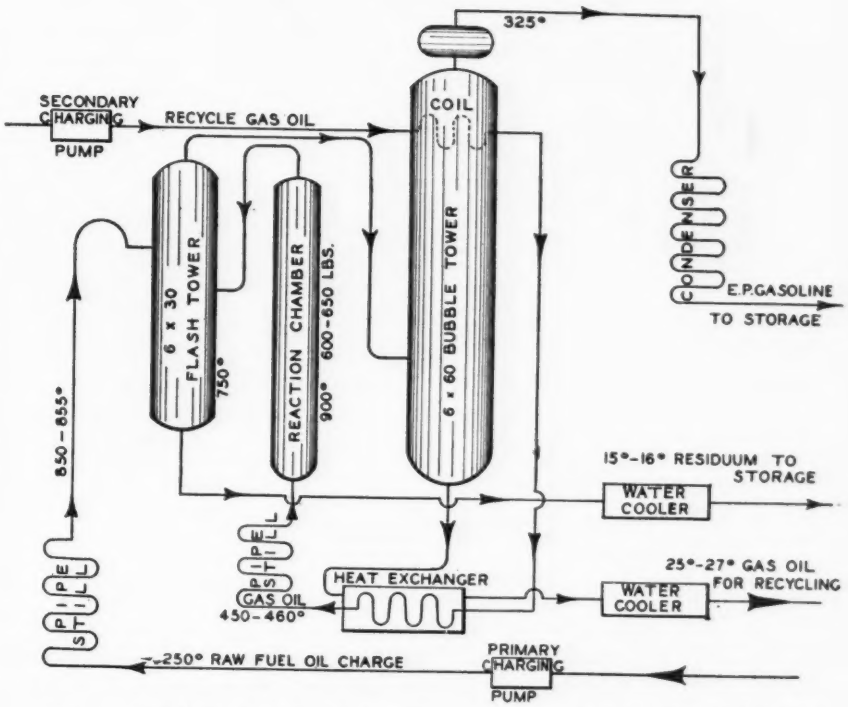


Fig. 1.—Flow chart of Cross cracking process at plant of Globe Oil & Refining Co.

THE chief element of the Globe plant which differs from former Cross installations is a second pipe still. The original pipe still used for a number of years to bring the gas oil charging stock to a cracking temperature was retained in the system as the reducing still and a second pipe still was added to handle gas oil on its way to the reaction chamber.

As a result of the modification, O. D. Gurely, general superintendent, has found it possible to increase the length of his operating cycle to about five times its original length of six days. The last two runs were 29½ days and 31 days and 10 hours respectively. A run previous to these two was continued for 22 days and the unit was shut down at the close only because of a failure of electric power caused by a heavy thunder storm.

On the latest completed run which lasted 31 days and 10 hours the reaction chamber was found to be only half full of coke when the unit was brought down. The run had to be brought to an end only because the slide valves had coked up.

The large increase of operating cycles has been an important factor in favor of the new method of operation. It has reduced the labor costs of operation and increased profits through reduction of lost cracking time. Savings in fuel have been important.

Possibly the most important advantage of the modification is the fact that the skimming plant has been relieved of the job of making a gas oil cut overhead for charging stock. The gas oil cut from the crude stills may be sold directly to Globe customers. By using residuum fuel direct from the final still of the crude battery the cracking plant is charged on the books with a lower priced charging stock than formerly.

Final results of the operation do not differ materially from those obtained under the old method of operation in spite of the heavier oil charged. Formerly the plant was designed to run 500 barrels of gas oil per day. Now the plant has been averaging 700 barrels of fuel oil charge per day.

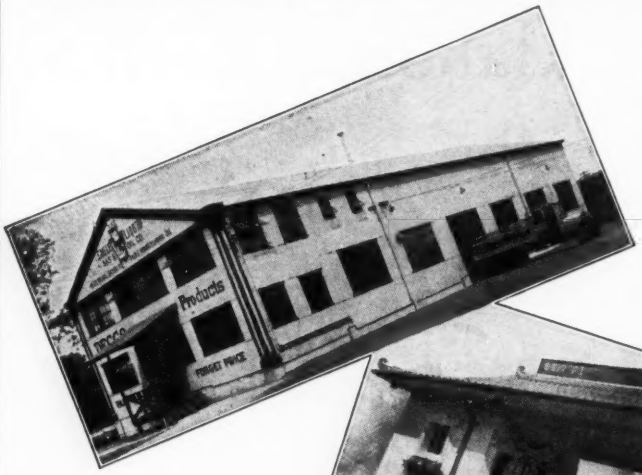
Based on the fuel oil charge the Cross unit has been giving a yield of 45 per cent of 428 end point gasoline. The initial boiling point of the finished motor fuel runs from 90 to 96° Fahr. and the gravity from 56 to 57 A.P.I. Former losses were 10 per cent of the gas oil charge. At present losses have been cut to about 4 per cent based on the fuel oil charge.

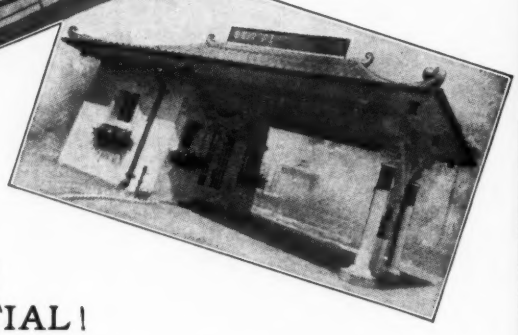
FUEL oil charging stock averaging about 25 gravity is drawn from the final still of the crude battery direct into a charging tank. From this tank it is picked up at an average temperature of about 250° Fahr. and pumped to the first pipe still as indicated in the accompanying flow chart, Fig. 1.

In this first still the oil is heated to 850 to 855° Fahr. before being charged into a 6 by 30 foot flash tower.

From the bottom of the flash tower about 25 per cent of the oil charged to the system is drawn off as fuel oil. The fuel runs about 15 to 16 gravity in current operating practice. The system could be regulated to carry the residuum down to 10 gravity or below but Mr. Gurley has kept it lighter in order to increase its marketability. Railroad customers of the Globe demand a fuel with less than 1 per cent of B. S. by the benzol test and a minimum gravity of 15 A.P.I. The fuel drawn off from the bottom of the flash tower meets these

STEEL BUILDINGS for EVERY PURPOSE





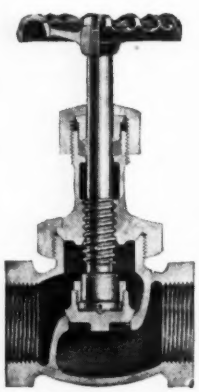
WAREHOUSES
OIL STATIONS
GARAGES
PUMP HOUSES
SUB-STATIONS
METER HOUSES
BUNK HOUSES
TOOL SHEDS

FIRE-PROOF!
ECONOMICAL!
and SUBSTANTIAL!

Send for our complete catalog of "STEEL BUILDINGS"

THE EDWARDS MANUFACTURING CO.

524-544 Eggleston Ave. **Cincinnati, Ohio**



Sectional view, Fig. 750, screwed, Jenkins Bronze "Marine" Globe Valve, with regrinding seat and union bonnet.

A union bonnet valve for the "in-between" pressures

For pressures between 150 and 225 lbs., a stronger valve than a standard pattern valve is needed, and yet the service does not require an extra heavy valve. For such work call on the Jenkins illustrated at the left.

This Jenkins union bonnet globe valve is a regrinding valve, designed originally for marine use but later adopted by the oil industry and a number of others.

Note in the sectional view, the powerfully threaded spindle of manganese bronze, the ample packing space with metal follower to compress the packing, and the bend seat at the neck which insures tight contact between body and bonnet.

JENKINS BROS.

80 White Street.....New York, N. Y.
524 Atlantic Avenue.....Boston, Mass.
133 No. Seventh Street.....Philadelphia, Pa.
646 Washington Boulevard.....Chicago, Ill.

JENKINS BROS., Limited
Montreal, Canada *London, England*

Always marked with the "Diamond"
Jenkins Valves
SINCE 1864

tests in full. It is passed through a water cooler direct to storage.

That portion of the oil which is vaporized in the flash tower passes out of the top to a 6 by 60 foot bubble tower along with cracked vapors from the reaction chamber. Any traces of gasoline which may have been left in the fuel by the skimming plant passes upwards through the tower and is condensed with the cracked gasoline. Tests at the plant have indicated that some cracking takes place in the first furnace and in the flash tower.

Gas oil vapors from the flash tower which are condensed in the big bubble tower, drop down and are drawn off through a heat exchanger and water cooler to recycle stock storage. This gas oil runs about 25 to 27 gravity. In some of the newest Cross units this recycle stock is picked up from the bottom of the tower and charged direct to the second pipe still making the process entirely continuous.

AT THE Globe plant the cool recycle stock is pumped through a coil near the top of the 15-plate bubble tower to aid in fractionation. From this coil it passes through a heat exchanger counter current to the hot gas oil from the bottom of the bubble tower. From the exchanger it goes to the second pipe still where it is raised to about 900 degrees before being charged to the reaction chamber where a pressure of 600 to 650 pounds per square inch is maintained.

Oil from the reaction chamber is flashed into the 6 by 30 foot tower previously described where heavy ends are drawn off with the residuum fuel. The overhead product is transferred to the bubble tower where it enters below the bottom plate.

Cracked gasoline vapors are taken from the top through a condenser and gas separator to storage. A Griscom-Russel cooler on top of the tower is kept at 325° Fahr. as a final knock-back of heavy ends. This cooler, with the coil through which cool gas oil is charged in the tower, maintain the end point of the cracked gasoline at 428° Fahr.

The gasoline requires only treating before it is ready for sale. Cracked gas oil separated out of the stream in the tower passes out of the bottom with the gas oil from the first tube still.

AN INTERESTING method of treating gasoline from the Cross plant has been in operation at the Globe plant for nearly a year. The process might be termed a contact filtering process since it is similar in some of its elements to the contact filtering method of manufacturing lubricating oils.

Cracked gasoline at the Globe plant is mixed with a 21-gravity solution of caustic soda in a mixing coil

packed with spiral tile as a first step in the process. From the coil the gasoline and caustic pass into a series of two 4 by 20 foot settling tanks where the caustic is allowed to settle out and is withdrawn to be used again.

From the settling tanks the gasoline is picked up by a centrifugal pump. The intake of this pump is arranged to pull in with the gasoline a supply of acid at the rate of about 6 pounds of acid per barrel of gasoline. The centrifugal pump serves the double purpose of pumping the gasoline and mixing it thoroughly with the acid.

The mixture of acid and gasoline passes directly to a De Laval centrifuge machine where the acid and gasoline are separated cleanly, due their different weights. Sludge acid from the centrifuge is used again in a half and half mixture with fresh acid.

Gasoline from the centrifuge machine drops into a 4 by 12 foot agitator where it is mixed with finely powdered fuller's earth which is introduced into the agitator with a worm screw. From this agitator the mixture of clay and gasoline is pumped to a 64-plate Sweetland filter press where the clay is filtered out and the treated gasoline pumped direct to storage.

Cracked sour gasoline from the Cross unit averages about 12 color before treatment. When treated the gasoline has been raised to an average of 25 color. The treated gasoline passes the corrosion test but shows a slight reaction to the doctor test. The treated gasoline is "sun-stable" in color.

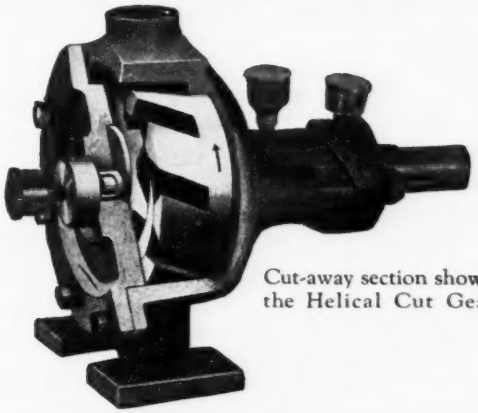
One important feature of the treating process as employed at the Globe plant is the absolute control of the amount of acid to be mixed with the gasoline and the length of time the two liquids are in contact. These two factors can be regulated through the speed of the centrifugal pump which charges the mixture to the centrifuge.

Holmes Co. Makes Auto-Lift

ATLANTA, Ga.—An auto lift designed for speeding up car lubrication, washing, polishing, repairs and other services, has been placed on the market by Ernest Holmes Co., Chattanooga, Tenn. It is known as the Holmes Universal Auto-Lift Co.

The cars are raised by front and rear axles and work can be performed more quickly and with more convenience. The lift is shipped completely assembled with only guide rails detached. It can be set up in half an hour and no pits, no air connections nor posts are used.

It operates by its own electric motor. Safety stops for up and down positions are provided to operate a special breaker switch in the motor box.



Cut-away section showing the Helical Cut Gears.

A Pump That's Different

THE helical (spiral) cut gears of the Perfection Rotary Pump make it stand out from the ordinary type of pump because each time a cam of the internal gear passes by the intake and discharge ports the column of liquid is cut with a shearing action. This eliminates the shock and vibration that is found with a straight spur gear or vane or bucket, especially when the pump is running at high speed. The intermeshing cams in the internal gear and pinion (the only moving parts) do not go into mesh at once but roll together in a smooth and gradual manner. This makes it smooth running and results in decreased power consumption.

Write for new Bulletin No. 271 which illustrates several types of unloading pumps.

Perfection Manufacturing Co.
2194 East Hennepin Ave. Minneapolis, Minn.

PERFECTION ROTARY PUMPS

Sold by Oil Equipment Jobbers in most of the principal cities.

BETHLEHEM
WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
Wax Testing Presses — *Paraffine Wax Sweater Plants*
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers and other Oil Refinery Equipment
Oil Burning Systems — *Complete Power Plant Equipment*

BETHLEHEM STEEL COMPANY, *General Offices, Bethlehem, Pa.*
District Offices
New York Boston Philadelphia Baltimore Washington Atlanta Pittsburgh Buffalo
Cleveland Detroit Cincinnati Chicago St. Louis San Francisco
Los Angeles Seattle Portland

Factors Affecting Pipe Line Construction; How Lines Are Laid

By R. S. Lord*

PIPE lines have been the accepted means of getting both oil and gas to market where the supply is great enough to meet the demand. Both these products are forced through the lines by pressure machinery driven by internal combustion engines using as fuel the same product they are driving through the lines.

However, pipe lines require a large investment and there are several factors that must be considered before any pipe is ordered or ditching machines are shipped to the field.

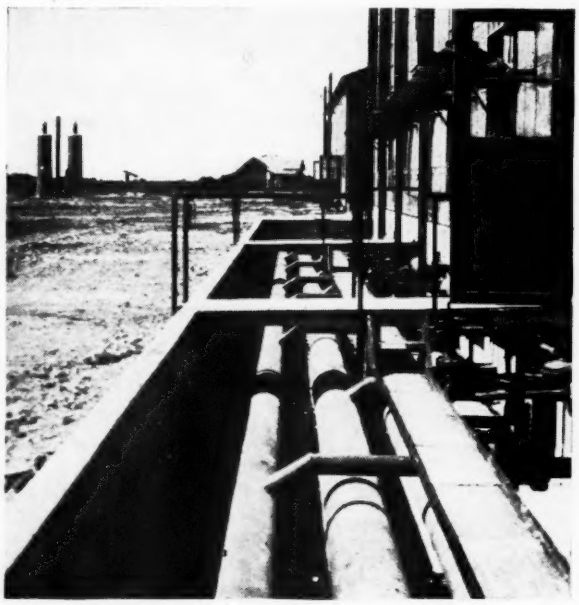
When a new field is brought in, it is necessary to determine the extent of the field that future production may be estimated. Geological surveys are made and wells are tested for their open flow capacity, gas wells are also tested for the gasoline content* of the gas to determine the desirability of constructing a natural gasoline plant at the field or along the line. After all this data has been assembled, nearby towns are investigated as potential markets. Surveys of the cities are made both as to numbers of dwellings for domestic consumption but also the possible industrial consumption.

The future of the cities investigated is also forecast to determine future as well as present needs so that provision can be made for the coming years. Having completed both the field and market surveys, and arrived at the conclusion that supply and demand are sufficient for the future as well as the present, the route from the field to the market is laid out.

In doing this, consideration is given the general character of the land over which the line is to be laid so as to have a route on which there will be as little hand ditching and as few river crossings as possible. Consideration must also be given to the nearness of the line to a railroad or main highway to cut down the expense of hauling pipe and other material.

Another factor is whether or not there is a market for the product between the field and the major market—that is, should the line be run in a direct line or are there sufficient intermediate points to warrant adding more miles to the length of the line to take in the intermediate points. Having determined the extent of the market and its daily demand in cubic feet and also the nature of the peaks, the size of the line is decided upon and also the pressures at which it is to operate, allowing sufficient pressure at the market gates to allow for friction loss through the distributing lines.

At this point in the procedure, the cost of pipe line per mile of large line with low operating pressure, is balanced against the cost of a small high pressure line with compressor stations to provide the necessary pressure to overcome the line friction. Long lines for the transmission of large quantities of oil or gas are the subjects of estimates of different numbers of sections with a pump or compressor station for each section, the location of the stations being chosen with due regard to the available water supply.



Suction and discharge manifolds are located in an open concrete trench outside the building

Another point that enters here is whether the line is to be of the same weight pipe throughout, to be of the "telescopic section" or whether it is to be looped. With each of the possible line constructions the annual operating expenses are estimated in order that the size of the line to be determined on will be as nearly as possible the most economical size.

From the data gathered as to developed and potential production of the field and the present and future market taken together with the estimated cost of the line and its operating cost, the decision is made to build or not to build the line depending on whether the earnings will be sufficient to retire the bonds and permit a reasonable return to the stockholders.

*President Hope Engineering Supply Co.

Preliminary Work Necessary

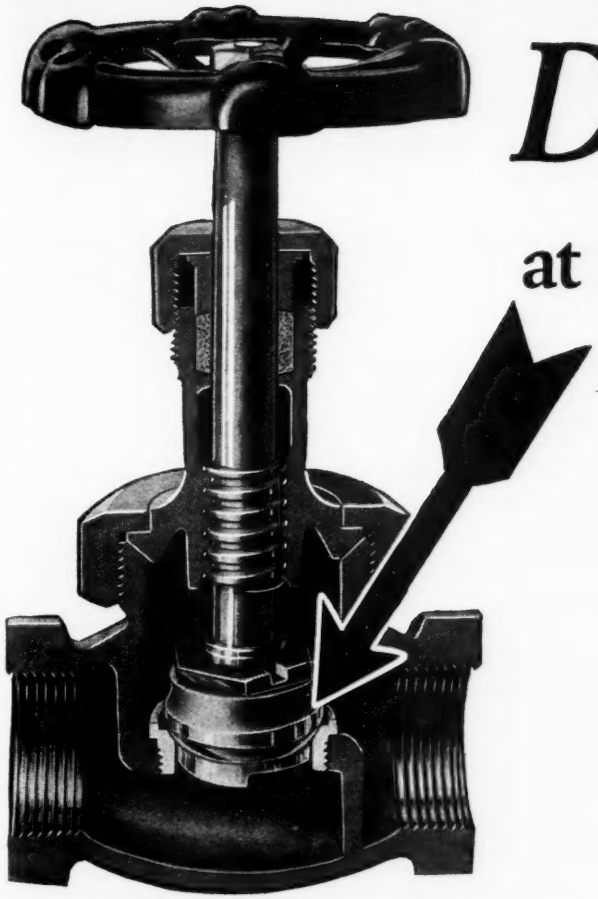
ASSUME that the pipe line is to be laid. Before any trench work is done there are many preliminaries to be taken care of. The order in which they are noted here is not necessarily the correct order but all are important steps.

At the main office there is much activity with the large amount of paper work required to take care of all the necessary details of such a project. The main item, of course, is the purchase of the pipe, tons of which must be bargained for and routed to the most advantageous points along the right-of-way. If the gas line is a coupled line practically the same work must be done to insure the proper number of couplings being distributed at the proper points along the line—all with the minimum of hauling from the railroad.

For pump stations or compressor stations, as the case may be, there are the power and pressure ends to be purchased and suitable delivery to be arranged for. Here arise the varying factors of cost per horsepower of mechanical equipment against cost per horsepower installed, including freight, foundation, building and erection and annual cost of operation.

For the actual construction work it is necessary to assemble the field forces and establish camps. Due to the requirement of extreme portability the camps consist of tents with army cots for beds. With every camp there are cook and mess tents with their paraphernalia. The camps are located at such distances apart as will enable the men to lose as little time as possible going to and from the point at which they are working. At this time the ditching machines and hand tools are sent out and if the line is to be a welded line, the welding equipment is scheduled.

If the actual construction of a



Durability

at the heart of the valve assures long life

The heart of a Globe valve is in the design and material of the disc and seat ring. REDURO Discs are ball-shaped and fitted closely to valve stem. Closing on a 60 degree beveled seat ring, the disc is allowed to adjust itself in the seat ring, forming a tight joint without forcing. The disc turns freely on the valve stem, seating in a new position each time the valve is closed.

REDURO Seat Rings are slotted for easy removal —no special spanner wrench is necessary. In addition to a freer port through the valve, this design allows a full size spiral throttle lip in the valve disc. This throttle lip takes the cutting of the steam when the valve is cracked, protecting the seating surface and permitting exceptionally fine throttling without disc chatter.

Write for prices today, advising the conditions under which valves will be used. A complete line of REDURO Valves are always on hand at our various warehouses.

REDURO Seat Rings and Discs are *SWIFT Metal*, a special nickel alloy developed in our own foundries. It is harder than bronze, has a high resistance to the effects of temperature, and is free from attack by practically all water conditions which ordinarily affect bronze seats, rings and discs.

REDURO Valves can be packed under pressure. Bronze packing nut, bronze follower and deep stuffing box filled with pure asbestos packing insures a tight joint around valve stem.

PRATT & CADY

REDURO

Bronze Globe and Angle Valves

Send for Folder No. 15 which gives full information regarding Reduro Bronze Globe and Angle Valves

READING STEEL CASTING CO., Inc.

An Associate Company of the American Chain Company, Inc.

Bridgeport, Connecticut

Offices and Warehouses in Principal Cities

Stocked by

Reading Steel Casting Co., Tulsa, Houston
Woolward Wight & Co., Ltd., New Orleans

READING *for steel*
PRATT & CADY *for iron and bronze*
specializing for quality valves and fittings
"There can be no compromise with safety"

SAVE
REPAINTING—
clean with OAKITE

CLEAN, good-looking storage tanks are a business asset.

But instead of repainting, many oil concerns have reduced substantially their repainting costs by cleaning equipment the Oakite way. For Oakite materials remove every bit of discoloration, oil, dirt and weather stains. Makes old paint look like new.

Tell us your problems or write for booklet. No obligation.

Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the U. S. and Canada.

Oakite is manufactured only by

OAKITE PRODUCTS, INC.
42C Thames St., New York, N.Y.

(Formerly Oakley Chemical Co.)

OAKITE
Industrial Cleaning Materials and Methods

Get a Binder
for
National Petroleum News

YOU can get one specially made to hold 26 issues of National Petroleum News—made of imitation leather and inexpensive.

It enables you to keep the weekly issues of National Petroleum News in good order and easily accessible.

Send check or money order for $2 and your N. P. N. binder will go to you promptly.

NATIONAL PETROLEUM NEWS
1213 West 3rd St.
Cleveland, Ohio

Name.....

Address.....

large natural gas transmission system, the first step necessary is the locating of a right-of-way that will afford the best route for a pipe line. That is, the determination of a route that will be satisfactory from a construction standpoint and also so that it will be free from troubles as far as possible as an operating unit. After the right-of-way has been located and the line surveyed and staked, it then becomes the duty of the right-of-way agents to purchase easements from the owners of the land and the work of these agents is at times extremely difficult owing to the unreasonable attitude assumed by some of the land owners.

In cases where the right-of-way agents has exhausted every effort to negotiate a reasonable agreement, there is only one avenue left to the pipeline company and that is to exercise the rights of eminent domain which powers the pipeline company have when operated under the common carrier laws.

After the right-of-way has been acquired, it then becomes the duty of the right-of-way clearing crew to proceed with clearing off the right-of-way over its entire length for an approximate width of 30 feet, or sufficient width to permit the operation of ditching machines and transporting material.

In many cases it is necessary to do considerable grading or road work in order that the right-of-way may be traveled by both teams and trucks. About this time, carloads of pipe arrive at the nearest shipping points where the unloading crews take charge and load it upon wagons or trucks and it is transported to the right-of-way where is it distributed in such a manner as to be readily available for the pipe laying crew.

THE ditching or trenching of a large pipe line system was formerly a problem of some magnitude owing to the large amount of hand labor necessary but today, we have trenching machines which operate very satisfactorily and the man power required in this phase of the work is scarcely noticeable. The trenching machines are operated on 8-hour shifts in many cases so that they are in continuous service the entire 24 hours. The amount of work turned out by these machines, of course, varies with the size of line that is being laid. If we take a 12-inch line as the average size, a fair day's work for one of these machines is from 1 to 1½ miles.

We are now ready to apply the protective coating to the pipe. There are numerous manufacturers with coatings on the market today—all claiming merit for their particular product. In most cases these coatings consist of paint of two characters—one being of asphalt base and the other of coal tar base. The coatings most commonly used are those with the coal tar base and two separate coats are usually given the pipe in the field.

In soil conditions where alkali is prevalent, it is often deemed advisable to apply one coat of the paint and then wrap the pipe with suitable wrapping and apply another coat on top of the wrapping. The matter of protective pipe coatings is being given considerable attention at present and there is no doubt but that a decision will be reached within the next few years as to what is really the best coating that can be applied as pipe protection.

IF THE line is to be welded, the necessary welding and cutting torches and all other welding equipment including oxygen, acetylene and welding rod supplies will arrive with the pipe. The progress in the construction of a welded pipeline is largely one of organization, and with an experienced foreman in charge, the work proceeds in a regular manner which consists of one set of welders butting joints and welding them into lengths, the next set of welders welding 2 sections of 2 joints each into 4-joint strings and the next set of welders welding 4-joint strings into 8-joint strings, and each string of 8 joints is then welded into a continuous section of the line.

If the line is laid with rubber packed couplers, there is, of course, more opportunity to lay it with greater speed. These couplers are nothing more than rubber packed stuffing box joints and are made of a center ring, two follower rings with a gasket on each side drawn together by the necessary number of bolts. The total amount of work completed per day for this type of joint is largely governed by the number of wrenchers at work and from some obtainable records it is found that as much as four miles of 12-inch line per day has been laid.

The lowering of the pipe after the line is welded, presents a problem which must be studied carefully in order to take care of the necessary expansion and contraction. If the line is being welded in the summer in a territory where the temperatures are very high, extreme care must be used to see that the pipe is lowered during the early hours of the morning and that the necessary slack is provided and all the pipe thus lowered must be covered before the high temperatures again prevail.

If the line is being laid with rubber packed couplers, it is not necessary to give much thought to the lowering of the pipe from the standpoint of expansion and contraction; the rubber packed couplers are, in themselves, expansion joints and

If the pipe will stand it, so will the welded joint *

SIXTY-FIVE THOUSAND MILES of pipe carrying 2,250,000 barrels of oil a day. That is the picture of oil transportation today.

Increased production and lower maintenance cost mean something in an industry of such magnitude. That is why in the last five years 10,000 miles of oxwelded pipe have been laid, and other joints are fast becoming obsolete.

The screw joint and the many patented joints that require gaskets all have their shortcomings. Limited pressures only can be used in pipe lines with any of these joints. In turn, this cuts down the amount of oil that can be transported.

Long oxwelded pipe lines are now operating at pressures of 700 pounds per square inch, pressures that were impractical before the advent of the oxwelded pipe joint.

In spite of this severe service properly oxwelded lines are leak proof. So much so that linewalkers, to spot leaks, and claim departments, to adjust claims for property damage caused by leaks, have been practically eliminated. A striking demonstration of the reliability of oxwelded joints.

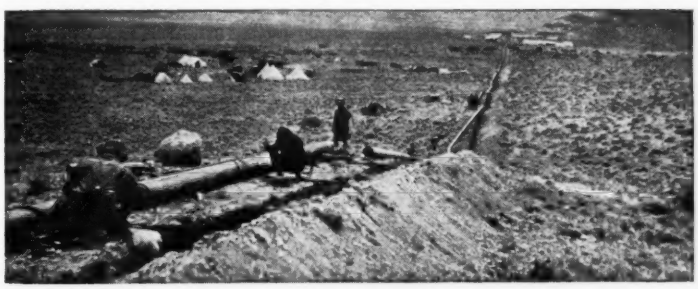
Linde Procedure Controls, detailed instructions on the proper method of installing oxwelded lines, are available at Linde offices.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

General Offices: Carbide and Carbon Building
30 East 42d Street, New York

37 PLANTS . . . . . 105 WAREHOUSES



LINDE OXYGEN

★ No. 10 of a series of advertisements on the engineering phases of oxy-acetylene welding and cutting. Send for the booklet entitled: "Engineering and Management Phases of Oxwelded Construction."

therefore the problem is entirely different from that of the welded line.

In connection with the laying of a large pipeline system, it is necessary that a telephone system be constructed and it is preferable to have this construction precede the pipeline construction in order that telephone service may be available during the work. The principal necessity for the telephone system arises from the standpoint of operation whereby the central or main office can be in constant touch with all the fields, pumping stations and line walkers and thus enable them to keep constant record on gaugings on an oil line and pressure conditions on a natural gas pipe line.

After the pipeline is complete but before it is all tied together, it is "blown out." The process involves only the application of high pressure gas or air to sections of the line to blow out dirt, chips, shavings, water or any other debris that might ruin pipe line equipment were it left in the line.

THE pressure required in the main transmission lines runs in the hundreds of pounds while that in the city and town distribution systems ranges from 50 pounds down to a few ounces over normal atmospheric pressure. The necessary reduction in pressure is obtained by the use of pressure regulators—sometimes installed in series depending on the reduction required.

Where the pressure change is great, there is a possibility that the regulators will freeze because of the expansion of the gas and become inoperative. In some installations it is necessary to heat the line at a point adjacent to the regulators and within the regulator house to maintain the equipment at such a temperature as will prevent freezing.

After the line is in operation it is extremely important that it be patrolled constantly in order that its condition may be maintained in such a way as to prevent wash-outs and the resulting line breaks which cause serious interferences with operation and loss of revenue. In patrolling these lines, it is customary to divide them into districts with a line-walker established on each and it is his duty to walk his section and make daily reports to the operating office as to his observations and also to make such minor repairs as he can and report all matters that he is unable to take care of so that a repair crew can be sent to make the necessary repairs.

Station Construction

COINCIDENT with the actual work on the pipe line, the compressor stations are constructed. The sites have been chosen with due regard to an ample supply of water obtainable from a nearby stream or from drilled wells. The suitability of the soil for engine foundations and the possible necessity for future extensions have also been factors in the choice of sites.

It is necessary to blow out the line before it is solidly coupled together

Station sites as a rule do not exist ready made—nature has usually equipped the land for other purposes such as the growth of timber or things remote from station work. It is therefore necessary to clear the site of all such obstructions allowing plenty of acreage for open space around the station. In some cases it is necessary to fill in to give the main station a few feet of elevation to provide proper drainage. Lines are then stretched to define the outer walls of the main buildings from which the limits of other construction work are laid out. The excavation for the building sills and heavy machinery foundations are then made also cutting out the trenches for the station piping.

IN SOME instances it is necessary to excavate for a mat extending under all foundations. When the concrete is poured care is taken to insure the binding of all sections especially where there is a possibility of the surface of one section drying before the other is poured.

It is advisable not to tie the engine foundations and floors to the building foundations so that no vibration from the engines will be transmitted to the walls of the building. The framework of the building is not erected until the concrete work has set so that proper alignment and fitting of the building parts can be obtained.

As soon as the framework is erected the crane runway and the cranes are installed so that the crane can be used in the erection of the machinery. The type and materials used for the building depends on the permanence of the installation although buildings of the fabricated steel type are now generally accepted as standard in the gas and oil fields.

Owing to the construction of gas compressing equipment, buildings used to house gas compressors are open from end to end. Oil pumping stations on the other hand are constructed with a brick fire wall running the length of the building with ports and stuffing boxes through which the shaft connecting the engine and the pump extends.

THE suction and discharge manifolds are located in an open top concrete trench running the length of the outside of the building as a safety precaution—this brings all valves outside the building where they can be reached should there be a line breakage or a fire within the building. The manifolds, particularly the suction manifold, are installed of such size and arrangement as will insure no extra load on the compressors and to insure equal filling of all cylinders.

The compressing and pumping equipment in the early days of the oil and gas industry was steam driven but the trend toward internal combustion engines early gained sufficient impetus to effect a standardization on this type of equipment. In oil line stations Diesel type oil engines ranging from 100 to 750 horsepower in both the 4 and 2-stroke cycle types and both horizontal and vertical arrangements are used. There are many oil pumping stations in which the pumps are driven by natural gas engines.

The gas is obtained from nearby gas wells or from a natural gas system located near the oil line. The engines are purchased large enough in horsepower rating to allow them to operate at 80 to 85 per cent of their rating when the pumps are operating at full capacity. The fluid ends are usually duplex or triplex double-acting pumps varying in capacity from 10,000 to 40,000 bar-

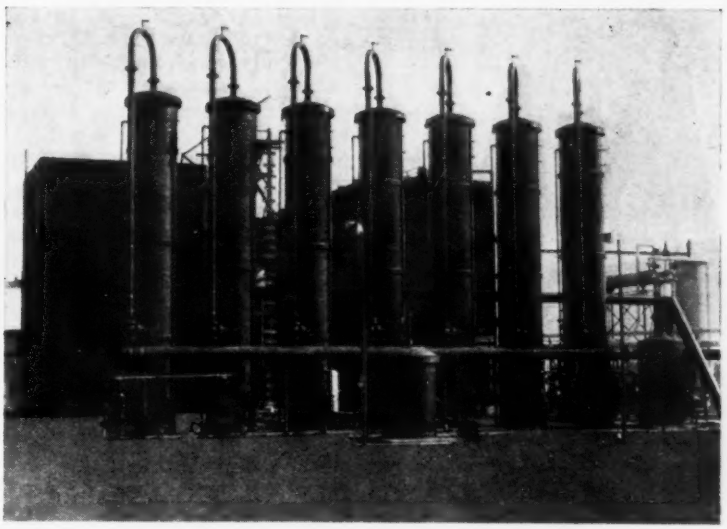
rels per day depending on the line capacity. They are either of the pot valve or forged fluid end type and usually have air chambers on both the suction and discharge sides to reduce the effects of the pulsating flow of liquid.

IN GAS compressing stations, the compressor and gas engine are built in one unit in what is called the horizontal opposed type. That is, the gas power end and the compressor end are on opposite sides of the crankshaft and are connected by tie rods. Another type of gas compressing unit that is coming into use in many fields is the vertical type. This compressor is a self-contained machine with power and compressor cylinders mounted on a common main frame and operated from the same crankshaft.

Some of the advantages of these engines are that due to compactness they can be installed more cheaply than the horizontal engines which require more room, larger foundations and larger buildings. The effects of the reciprocating motion of the engine parts are absorbed directly by the foundation since they act in a vertical plane whereas in the horizontal type machine the tendency is to rock the foundation. The engines are rated in horsepower from 80 to 1300 and may be single cylinder single acting for the small size to twin tandem double acting (8 power cylinders) for the large size. Some of the smaller sizes are built of the 2 stroke cycle type but all others are of the 4-stroke cycle type. The fuel consumption for the 4-cycle engines is guaranteed at 10 cubic feet per indicated horsepower in the compressor cylinder while the fuel consumption of the 2-cycle engines averages 15 to 20 cubic feet per compressor indicated horsepower.

The hot discharge gas is usually cooled by means of tubular type gas coolers although several other methods have been used which are equally good. There have been many millions of feet of gas cooled in pipes submerged in a pond or dam which is part of a flowing creek. Double pipe heat exchangers are still giving a good rate of cooling when water is circulated through the inner pipe and trickled over the outside surface of the outer pipe. The water for the engine jackets must be free of scale forming elements and sediment to avoid deposits in the engine jackets that will interfere with proper engine cooling.

To provide suitable water for this purpose, water softeners are installed —these are generally of the zeolite type employing a sediment basin or tank. In many installations a closed cooling system is installed for the



Campbell Records Are Unparalleled

The above view shows a battery of seven Campbell Oil-Froth Absorbers built for 400 pounds working pressure at the World's largest stripper plant. Campbell Absorbers are also used at the World's largest gasoline plant with a capacity of 144,000,000 cubic feet of natural gas per day. Over one million gallons of gasoline are daily produced by our Absorbers.

J. A. Campbell

Natural Gas Engineer

Consulting — Designing — Constructing

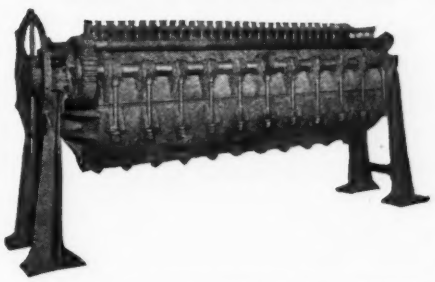
P. O. Box 669 Long Beach, Calif.

CAMPBELL

OIL FROTH

absorber

Recovering PbS—Reducing B. S.



THREE chances to cut down expenses.

Recover PbS in marketable form
Reduce B. S. contents
Break up emulsions

All these can be gained by using Sweetland Filters for treating doctor solutions.

In ordering Sweet'ands for this purpose, don't forget that new filters are the improved filters.

UNITED FILTERS CORPORATION

Hazleton, Pa.—Los Angeles Office, Central Building

Other Offices in Chicago—New York—Salt Lake City
Export Office—25 Broadway, N. Y.—Code Address, Unifilter, New York

Patent Pending

MORE OIL SALES

With oil displayed in this Rack holding 24 Dispensers. Has hinged caps covering each spout. All Bottle trays removable. The Neatest and Best Rack on the market.

Send for Particulars

WM. Neil & Co.
617 W. Division St. Chicago, Ill.

Down *with the*

Cold Test!

Now for the first time we've forced down the cold test of Penn-Empire Motor Oils to 15/20 above zero....the point where all the lubrication properties of this high quality 100% Pennsylvania Oil can be enjoyed in winter as well as in summer.

This Sharples processed oil presents entirely new cold weather sales opportunities never before possible with Pennsylvania Oils of Penn-Empire quality.

EMPIRE OIL WORKS
Oil City Pa.

Motor Oils
Tractor Oils
Industrial Oils
Kerosene
Gasoline
Petroleum

When you buy Penn-Empire you get the best.

PENN EMPIRE

engine jackets. By this system the softened filtered water is cooled in pipe coils similar to the double pipe gas cooling coils.

In this way there is not much loss and the softener is not called on to treat very much make-up water. The untreated water is used for open circulation in cooling the coils through which the soft water passes. To obtain the necessary cooling effect for the chilling of the raw water, open atmospheric type coolers are installed. These towers cool the water by breaking the flow into drops as the water descends from the top to the basin underneath. The heat is abstracted from the drops of water by evaporation which continues until the water is cooled to a point near the wet bulb temperature. The raw water which is evaporated must of course be replaced from a nearby stream or from wells.

The auxiliary rooms vary in size and equipment with the size and location of the system. Most auxiliary equipment is now motor driven and is supplied with current from internal combustion engine driven generator units. These units are installed in duplicate, each large enough to carry the total auxiliary load including lighting.

COMPRESSORS for charging the starting air tanks are installed in duplicate units—one of them motor driven and the other belted to a small gasoline or kerosene engine so that it will always be possible to charge the starting air tanks. The cubical capacity of the air storage tanks and the size of the air compressors are governed by the size and load conditions of the station.

The circulating water pumps are of the motor driven centrifugal type and are so piped that either treated or raw water can be handled by any pump. They are installed in such number that efficient handling of the water may be obtained and still have a spare unit.

The main bearings of the engines are lubricated from a circulating system that incorporates a centrifugal oil purifier to clean the oil either continuously or in batches. More horsepower hours per gallon of oil are possible when such a system of lubrication is used.

The water treating plant and salt storage are usually housed in a separate building. Some of the last minute stations that are out in the sticks—where the majority of them are located—have a small refrigeration plant located with the water softener to provide cool drinking water for the tour men and ice for their houses.

The stations are heated in the fall and winter partly by radiation from the engines but for the most part by a hot water system obtaining its heat from the engine jackets and the exhaust.

Since the majority of stations are located away from towns or villages and it is impossible for tour men to go on duty at a station and live at any distance, suitable living quarters are erected near the station. These dwellings are frame houses of 4 or 5 rooms and are shipped to the site in the knocked down condition. There are occasions when it is cheaper and more desirable to construct the dwellings of lumber shipped to the station site for this purpose.

After all construction work is completed the grounds around the station and dwellings are cleaned up and graded. Some stations are made veritable beauty spots while others are given only enough attention to keep them clean.

I. O. M. A. To Inspect Member Stations

CHICAGO, Oct. 8.—To give Independent Oil Men of American members a check on their service and stations L. V. Nicholas, president, is working on a plan to have members inspect each other's stations. The plan is discussed in the I. O. M. A. president's weekly letter of Oct. 6.

As outlined to Kansas jobbers recently, who approved the plan, postcards will be provided members to be filled in and returned to the member at whose station they stop. Kansas jobbers suggested that the postal cards also carry such questions as "Is the Spread Eagle adequately displayed," and "Are the 'Coupons Accepted Here' signs up," and "Was the service courteous and efficient" and several blank lines for suggestions.

Mr. Nicholas writes that this idea resulted from his recent letter calling attention to rest room and toilet facilities at service stations.

At the fall convention it is planned to have tentative inspection cars submitted to the members and it is probable that they will be given to members early in November.

Mr. Nicholas' comment on the point brought up at the Kansas meeting on how members would take criticism from other members on their service and stations was, "I was delighted to find that all the members present stated they would not only appreciate receiving such constructive and helpful information but that they would endeavor to the best of their ability to profit by the suggestions, and they stated that they felt such a system would be highly desirable."

LINCOLN, Neb.—Earl Coryell Co., marketer of petroleum products here, has just completed and opened a service station in the downtown district of Lincoln. The station covers one-quarter of a city block and has more than 12,000 feet of concrete drive-way.

Bunker C fuel oil *from* heavy Smackover crude!

For the pipe still alone, the products and yields are:

PIPE STILL YIELDS

Product	*Percentage of Total Charge*
Gasoline	17.40
Cycle Gas Oil (Cross Plant Recharging Stock)	47.02
Fuel Oil	35.58
Total	100.00

Since both the tube still and Cross still use the same fuel tanks, 100% recovery is assumed for the pipe still. All loss is thrown on the Cross plant, which gives products and yields as follows:

CROSS STILL YIELDS

Product	*Percentage of Total Charge*
Gasoline	53.00
Fuel Oil	38.95
Gas, Coke and loss	8.05
Total	100.00

AVERAGE TEST *of* UNTREATED GASOLINE PRODUCED

Gravity A. P. I.	51.4
Color (Saybolt Chromometer)	15

A. S. T. M. DISTILLATION

Initial	101° F.
20%	219° F.
50%	305° F.
90%	407° F.
End Point	433° F.

AVERAGE TEST *of* FUEL OIL PRODUCED

Gravity A. P. I.	9.0
Flash (Clev-o-cup)	280° F.
B. S. & W. by centrifuge	1.5
Viscosity at 122° F. (Saybolt Furol)	120

THE M. W. KELLOGG CO., 7 DEY STREET ~ NEW YORK

KANSAS CITY, MO., 700 BALTIMORE AVE. ~ SAN FRANCISCO, CAL., 444 MARKET ST.
LOS ANGELES, CAL., 329 PETROLEUM SECURITIES BLDG.

KELLOGG

PIPE STILLS ~ HEAT EXCHANGERS ~ GRAY TREATING TOWERS

The Editors' Viewpoint

National Petroleum News

Unionizing a Business Lowers Its Efficiency

By Warren C. Platt, Editor

THAT the oil industry may better judge what its attitude will be toward the declared purpose of the American Federation of Labor to unionize it, here is more testimony on how complete unionization of a business decreases its efficiency.

Union leaders argue their membership comprises the best men in a craft; that the union fires them with higher ideals and that the final product is best for mankind generally. Business knows from a multitude of sad experiences that, while it is desirable to pay labor—of all kinds—the high price, nevertheless that price must not be so high as to wreck the business, and that the high price can only be paid those who deserve it by producing the most of the best quality of workmanship. Business also knows that, even with the best of labor, it may go on the rocks but that, with inefficient labor, it is most certain to land in the sheriff's office.

The following points are taken from a series of articles published in the Boston Herald some time ago as a result of an independent investigation made by that paper. Much of the data herein is taken from a report of an investigation into New England railroads made by the Public Service Commission of New Hampshire.

"The New Hampshire commission refers to the abolition of piece work in car shops as 'having slowed up production and increased costs,' and adds that 'under private control 20% of the men in the passenger car repair shops and 58% of the men in the freight car shops were on a piece work basis.' The change (to straight time pay) went into effect in July, 1918. Several roads have computed what the shift from pay-by-the-piece to pay-by-the-hour has meant in decrease of efficiency and increase of cost.

"In efficiency, piece work car repairers went down 41%, air brake repairers 33%, passenger car painters 25%, brass foundry workers 11%. By the hour system it takes the painters almost two hours longer to paint a locomotive and almost 28 hours longer to paint a freight car. On the hour basis men bore two wheels in the time they used to take for three. In one boiler shop the time for doing work has gone up 32% and the output has gone down 24%, in a blacksmith shop the time is up 35% and the output down 26%. In a paintshop time increased 42% and output diminished 30%; in a passenger repair shop the time mounted by 32% and the work done slumped by 25%, and in a freight repair shop the amount done lessened 21% and the time necessary to do a given bit of work advanced 26%."

When William G. MacAdoo had his name plastered all over all railroad property as director general he signed an order devised by the railroad unions which, among other things, classified the work to be done and the type of men or mechanics to do it, and the rate of pay to go with each classification. The order was ironclad. Railroad operators could not make an exception under it. The government set up a labor board to see that the order was enforced and it is still in effect. Railroad men are filled up with their ridiculous and costly experiences under this order. A fair example of how it works is the following:

"To produce the necessary draft in the short smoke stack of an ordinary locomotive, steam is discharged through a nozzle at the end of a pipe from the boiler The tips on these nozzles have to be changed at times. Once a single handy man could do the job. A single handy man could do it today. But under the rules which now the railroad must obey it takes six men to do that job. The door at the front of the locomotive must be opened by a boilermaker, because this is the work the rules assign to a boilermaker, and he must have his helper hand him his tools. The blower pipe must be removed by a pipeman, because the rules assign him that kind of work, and his helper must hand him his tools. Then the machinist and his helper may remove the old tip and substitute a new one. The pipe man and his helper having replaced the pipe and the boilermaker and his helper having closed the door again, the job is officially completed."

UNION rules are rules no matter whether they afflict friend or foe. Cleveland is the headquarters of a number of railroad brotherhoods. They have two good bank buildings, one recently completed which is one of the city's larger office buildings, and in addition the engineers have a large office building. When the engineers' bank building was being constructed the following occurred according to the report of the American Plan Association of Cleveland:

"One would have thought that the building trades labor monopoly would have permitted the Brotherhood of Locomotive Engineers to erect their building without inflicting on their brother Unionists the injustices and costly strikes with which they have afflicted other builders in the city. But such was not the case. There were threatened strikes by iron workers, plumbers, hoisting engineers and marble setters as a result of the demand of the iron workers that they and not union carpenters be permitted to set the elevator doors. There were many strikes of short duration and a two month's strike by the painters union."

With the constant construction and repair work which is steadily going on around an oil property, be it a lease, a tank farm, pipe line, refinery, bulk plant or service station, consider the opportunity for these jurisdictional disputes in case the oil industry was unionized.

The oil industry has kept up with the tremendous demand for petroleum and its products by moving quickly and in as direct a line as possible. Quick movement and direct line action would be impossible with a labor union and a lot of business agents bossing the job.

"$1000 Starts You in Filling Station Business"—Want Ad Entices

CHICAGO, Oct. 7

WHY are privately owned filling stations so numerous in Chicago, how are they financed, what attracts so many inexperienced men into the business and what keeps them in it? This question has puzzled many an oil man and may never be fully answered, but a three-line, classified advertisement in a Chicago paper recently shed some light on the subject. The "ad" follows:

$1,000 STARTS YOU IN FILLING STATION business; latest equip; invest. secured. Call at room 1103, 5 S. Wabash-av.

Room 1103 at 5 South Wabash avenue proves to be the office of the Westwood Oil Co., of which Rudolph Kohn is the sole owner. Mr. Kohn explained his proposition to NATIONAL PETROLEUM NEWS with frankness. He stands ready at any time to set up any promising young man in the oil business for a consideration of $2,500, of which the first $1,000 must be paid in cash and the rest over a period of 12 to 18 months.

Just now Mr. Kohn is building stations at the rate of one a month and seriously expects to have a chain in Chicago larger than that of Sinclair Refining Co. before the new year. He has between 40 and 50 operating at the present time and says a brother-in-law who operates in similar fashion has eight or ten. None of these stations carry the name of the Westwood Oil Co. The man who invests the $2500 may call his station by any name he likes or, if he prefers, give it no name at all.

IN ALL of these propositions the Westwood Oil Co. retains possession of all the physical assets. Everything tangible around these 40 or 50 stations belongs to Mr. Kohn. He owns the land or has a lease on it which includes option to buy. He owns the building. The pumps and tanks, air compressor and stands, hydrant, tools and containers all belong to Mr. Kohn. Moreover, he keeps them in repair, paints them and improves them where necessary.

The man who invests his $2500 for one of these stations owns the business with all of its intangible assets. He really has paid $2500 for the privilege of doing business on a given location as long as he can make it go, and for a contract with the Westwood Oil Co. to supply him gasoline indefinitely at 3 cents under the prevailing retail price of Red Crown. Incidentally, the Westwood Oil Co. supplies all its stations with Red Crown gasoline.

Westwood Oil Co. has two bulk stations in Chicago, both on the south side of town. One is on the Chicago belt line at 62nd street and the other on the Illinois Central at 95th street. Tank trucks operate from these two plants and serve the stations, some of which are on the north side of town. The men at the stations pay for it on date of delivery at a price that allows them 3 cents to operate on.

DISCUSSING the type of station he furnishes these men for $2500, Mr. Kohn declared that he picked his own locations with care. "I can't make any money unless they do," he said. "They have to make money. We will not have anything but a corner lot. We put up a good building on it; one that conforms to the Chicago code. We install three pumps and three tanks, an air compressor and air stand. In fact we put in everything that is necessary to make it a filling station. I have been at this business four years and have made some mistakes, of course. I built one station that would not make the man's living at 3 cents a gallon so I sold it to one of the big companies.

"If we build a station and turn it over to a man and it fails to make money for him we are hurt the same as he is. We send a man out to this place to see what is the matter. If the trouble is with the location and the man is O.K. we give him another chance. We turn another station over to him with full credit for what he has paid us. If the man is no good we let him go. Sometimes we have to give him his money back and get rid of him. But we pick our men and place them with care. If we build a station in a Swedish community we try to get a Swede to run it. And we follow the same rule in other settlements with a racial complexion."

THE only items of equipment about the filling stations that Westwood Oil Co. does not own are the advertisements. Standard Oil Co. of Indiana supplies all the signs and pump globes advertising their products. "We prefer to sell a product that is well known to the trade," Mr. Kohn said. "We have a contract with the Standard to supply us regular Red Crown gasoline in sufficient quantity to meet our requirements. It is shipped from Whiting, Ind."

He did not divulge what he was paying Standard for Red Crown in tank cars delivered. But if he buys it on a Group 3 basis it costs him currently 8¾ cents laid down and inspected. The Chicago retail price is 18 cents a gallon, leaving a gross spread of 9¼ cents. Of this, 2 cents is state tax and 3 cents belongs to the filling station man and allows Westwood Oil Co. 4¼ cents upon which to do business, carrying the process no farther than the tank truck delivery.

"When any number of Chicago distributors are giving their filling station dealers 5 and 6 cents a gallon margins, how are you able to satisfy your men with a 3-cent spread," Mr. Kohn was asked.

"THE big companies give these wide spreads to men who own their own stations and equipment and the land or lease it occupies," he answered. "It costs nearer $25,000 than $2500 to buy a good location and build a good station on it in Chicago. More than that, you have to arrange frontage consent in each neighborhood which takes time and money too. Besides, you know, you can't get a permit approved by the city council for nothing." (This with a rising accent.)

"Men interested in my proposition do not have enough money to own their own location. Probably they could not pick a good location if they had the money to buy it. With no previous experience they might not be able to obtain frontage consent, and if they did they probably would not know how to get the approval of the city council. We do all of this for them and, for $1000 down, turn them over a station ready to do business."

TULSA.—E. F. Goggins, sales department of the Dunn Mfg. Co. of California, spent Exposition week in Tulsa, and then departed for a trip to Pittsburgh, Toronto, New York, St. Louis and different points on the Gulf Coast and Texas, before retiring to his headquarters at Oxnard about the first of the year. Jack Mellon kept Goggins busy during the week at Tulsa.

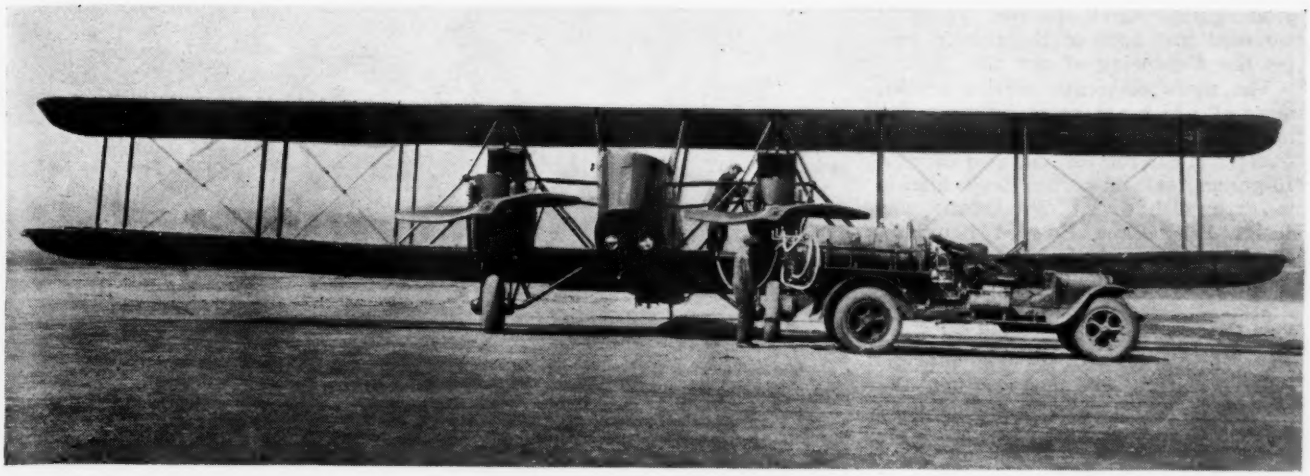
'GLOBE' is Read 'GOOD' by Motorists

INCE automobile operators have learned to differentiate between motor fuels, the quality refined into every carload of Globe gasoline never fails to win the approval of every user. "Globe Gasoline" means "Good Gasoline" to motorists who have once tested its quality.

We solicit inquiries from jobbers who believe in selling gasoline that is uniformly of exceptional quality.

GLOBE OIL & REFINING CO.
Refinery: Blackwell, Okla.
Sales Office: 609 Kennedy Bldg., Tulsa, Okla.

GLOBE
PETROLEUM PRODUCTS



Bombing plane being serviced with gasoline, oil, water and possibly air at Wilbur Wright field, Dayton, O. Some of these planes take 600 gallons of gasoline at a fueling.

Servicing the Growing Air Traffic

By Roger B. Stafford

N. P. N. STAFF WRITER

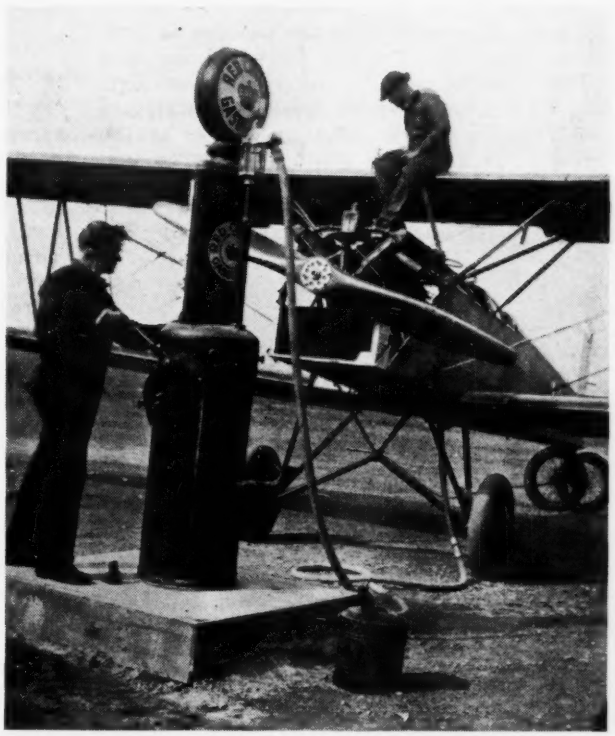
CLEVELAND, Oct. 7

ONE thousand airplanes a month put into Cleveland's municipal airport this summer. This is an average of more than 30 a day. Each plane required gasoline and most of them oil. This is an example of the volume of air traffic today. It is growing swiftly; cities from the smallest to the largest are buying and preparing landing fields, and opportunities are being opened to oil companies for a premium gasoline and airplane motor oil business.

Under normal conditions about 10,000 gallons of aviation gasoline, mostly fighting grade, has been delivered to airplane each at the Cleveland airport. The figures are those of Major John Berry, director of the field for the city of Cleveland and of managers of hangar concessions on the field. This is an average delivery of 40 gallons of gasoline to each airplane, which is not bad business, even the most pessimistic oil man will admit; and it seems likely that many opportunites for the operation of gasoline and oil concessions at flying depots will be available the next few years.

There are three types of flying fields in this country, at two of which concessions will be available in most cases. The first type is the military, at which concessions cannot be obtained. The government advertises for bids for delivery of aviation gasoline at a certain field over a period, usually a half year.

The municipal fields, which are becoming numerous, may or may not grant concessions. At the Cleveland airport an airplane company leases a hangar site for $1,000 a year and may put in its own gasoline storage and sell gasoline and oil. An oil company is not granted a concession but must deal with the hangar owner. However, the city is selling gasoline at present through pumps it leases at $1 a year from a large oil company, but Major Berry explained that this installation had been necessary in the early days of the field before commercial companies were established there. Without an assured supply of gasoline and oil at all times, it would have been impossible to expedite the movement from the field of planes, particularly commercial planes which drop in unannounced. Concession granting is likely at the third class of fields, those privately owned.



An ordinary service station pump used to fuel ships at the Cleveland airport. Three lengths of hose are used instead of one. Another pump is situated a few feet to the left of this pump. The location of these two pumps would be a joy to the hearts of those oil men that make station lighting a hobby. Overlooking these pumps is a 500,000,000 candlepower beacon that is visible 80 miles. Trade prospects can't miss seeing it

At the Cleveland airport gasoline dispensing equipment is stationary. Each hangar has tanks, and pumps, most of which were leased or lent them by two oil companies. At other fields trucks are used to service ships at the flying line, the chalk or imaginary line that borders the flying field, back of which are the hangars.

At Wilbur Wright field at Dayton, O., the largest flying field in the eastern part of the United States, the army has two types of service trucks. One is an ordinary tank truck for gasoline, supplemented with a small lube oil tank. A five-gallon hand operated blind pump with extra long hose is mounted at the rear of the gasoline tank and

a one-gallon hand operated pump is mounted just back of the truck's seat for the dispensing of the oil.

The more elaborate service trucks, more of which are being built for the military posts, provide gasoline, oil, water and air service and also carry a 10-gallon tank of carbon tetrachloride to extinguish fires. This outfit was designed by Capt. Edward Laughlin, chief engineer of the army airplane repair depot at Wilbur Wright field.

Fueling the airplane of C. W. Parkhurst and R. C. Lowes, Jr., at San Francisco just before the Dole flight to Honolulu. A small hand operated rotary pump and two lengths of pump hose were the only extra equipment needed on the small tank truck to convert it into an airplane fueling unit. The oil was carried in five-gallon cans on the can rack. A good-sized funnel with long spout is usually needed for both gasoline and oil.

THE service unit is mounted on a White truck chassis of about two-ton capacity. On the rear of the chassis is a 300-gallon gasoline tank and on the can racks on each side are 50-gallon cylinders, one of which is used for airplane motor oil and the other for water. Just back of the driver's seat is a small two-stage compressor which is driven by the truck's engine. Between the compressor and the gasoline tank is an air tank set crosswise. This tank is rated to carry 100 pounds pressure. On the right running board is a 10-gallon tank for the carbon tetrachloride.

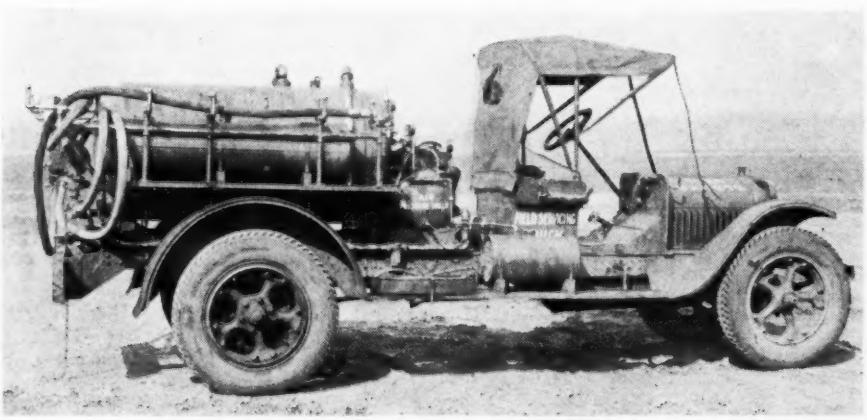
A larger outfit is being built for use at Wilbur Wright field, Capt. Laughlin said, because some of the bombing planes that come to the field can take 600 gallons of gasoline at a fill. A service unit similar to this is used by Henry Ford at his Detroit field and a mobile unit has been recommended by Major Berry of the Cleveland airport for use at Chicago's new flying field. John A. Casey, formerly of the air mail service, is manager of the Chicago field.

The army field service truck, as shown in an accompanying picture, looks considerably cluttered up. This is because of the long lengths of hose required to reach the gasoline and oil tanks and radiators of large bombers.

The gasoline is metered and pumped into the airplane tanks by a power-driven pump. The meter is mounted at the rear of the tank. The oil and water are forced in by compressed air. About 30 pounds pressure is used in summer to deliver the heavy oil to the planes, but in winter the pressure must be increased to 55 to 60 pounds, Capt. Laughlin said. The fire extinguisher is operated by compressed air and the air also is used to inflate the tires of landing gear. One Curtis bomber the writer saw at Wilbur Wright field had 54 by 12-inch pneumatic tires, and pumping up a flat in one of these is no gentleman's sport.

The army buys the gasoline in tank car lots for the Dayton flying field and keeps it in underground storage. The field service trucks are stationed at a hangar near the center of the flying line to which line planes taxi on reaching the ground, if possible. The field service trucks go anywhere along the line to service a ship. The gasoline storage is some distance back of the flying line and away from the hangars.

In fueling the flyers for the Dole prize, the Standard Oil Co. of California used small ordinary tank trucks. A small hand operated rotary pump was mounted at the rear end of the right can rack. One length of hose was connected with a faucet and the pump. Two smaller lengths were attached to the pump to reach the ship's tanks. This was emergency equipment. The Standard kept a truck of gasoline and picked crew at the call of the pilot of each plane day and night.



Field service truck at Wilbur Wright field, Dayton, O. Similar trucks are in use at other fields and are being recommended for use at many of the new municipal and private flying fields. This service truck carries 300 gallons of gasoline, 50 gallons each of oil and water in the small tanks on the can racks, and 10 gallons of carbon tetrachloride on the right hand running board for fire fighting. Note just back of the driver's seat a tiny two-stage air compressor which is driven by the truck's engine and then the air tank back of the compressor The square boxes, one on the air tank and the other on the running board, hold the air and fire hose. All gasoline is metered out, the meter being at the rear of the gasoline tank. Supports for the gasoline, oil and water hose are made of ordinary gas pipe

AT THE Cleveland airport, the Standard Oil Co. of Ohio has installed for the city two pumps near the flying line. These are on concrete islands just as at an automobile service station, the only difference being that three lengths of hose instead of one are used. The planes taxi or are towed to the pumps for fueling. Oil is poured in with a gallon measure and water put in with a can. There is also a small gravity filling unit that has been used for the U. S. Mail planes.

At the hangar of the Thompson Aeronautical Corp. at Cleveland a five-gallon blind pump is set at one side near the front of the hangar. Instead of the usual hose, a pipe line is attached to the outlet. This pipe line runs underground to a manhole set in the concrete apron in front of the hangar. A long hose is attached to the end of line in the manhole and planes are placed near the manhole for fueling. Oil may be either pumped from a drum set on a three-wheeled truck or metered out with a gallon measure.

"Tex" Marshall, manager of the Thompson corporation, said he used or sold a 55-gallon drum of oil a

Insure your future business

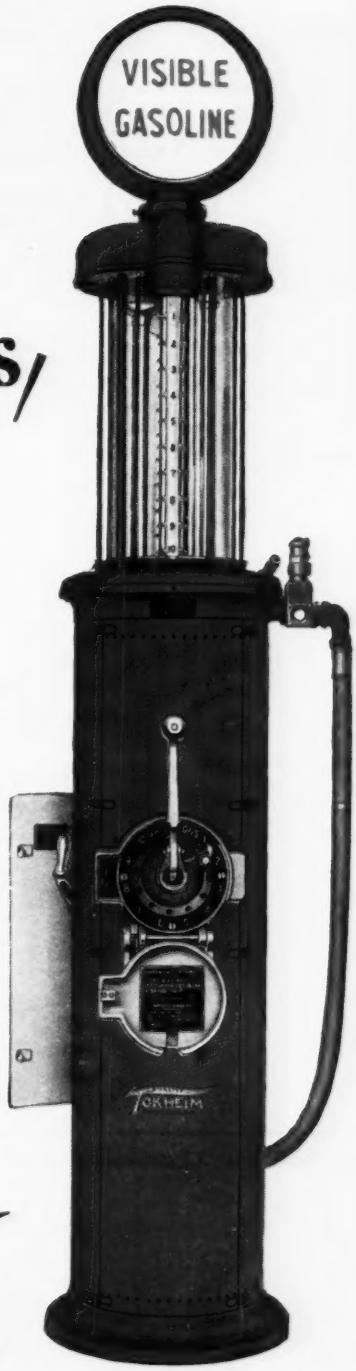
CAN you buy insurance that will protect future business? Can you count on continued patronage from present customers. Added business from new customers?

Yes—by giving the right kind of service. Not just ordinary service—but better-than-ordinary service. In a word—super-service!

To render super-service, you need every possible equipment aid. Long hours, hard work, will not compensate for inadequate and inferior equipment.

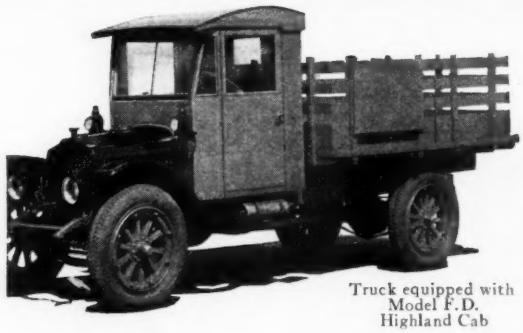
Tokheim Cut 600-605 is made for super-service requirements. Speed. Accuracy. Correct account. Exact quantities—to the last drop. Single-unit Master Meter Control. Motorists' time saved. Attendants' time saved and made available for attention to those little details that the motorist appreciates.

Cut 600-605 provides the best insurance of future business that you could ask. Write for details now—to Department "M".



TOKHEIM OIL TANK & PUMP COMPANY
FORT WAYNE, INDIANA

TOKHEIM
Master Control
VISIBLE GASOLINE PUMPS



Truck equipped with Model F.D. Highland Cab

A Cab adaptable to all trucks and to all road conditions

A WIDE range of models makes Highland the universally adaptable truck cab.

Extremely practical because of their durability and sturdy construction they present in addition an attractive appearance coupled with extraordinary riding comfort and weather protection.

The Rocker Sill Mounting, an *exclusive Highland feature* makes these cabs immune to the stress and strain of rough work. The illustration below shows a front view of a truck equipped with Highland Cab with chassis badly twisted. Note that cab is in perfect alignment with radiator. No binding of doors. No tearing of curtains. No evidence of strain on dash or cowl.

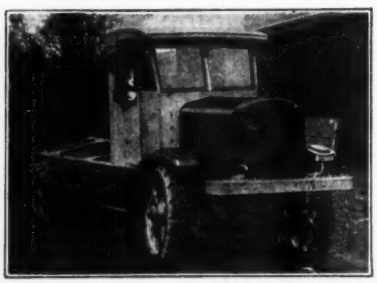
We will be glad to explain in detail this new feature as well as show the various models applicable to your needs. Write us for name of nearest distributor.

HIGHLAND *Cabs*

with ROCKER SILL MOUNTING

THE HIGHLAND BODY MFG. CO.

430 Elmwood Place, Cincinnati, Ohio



This truck is equipped with Highland Cab. Note how Rocker Sill Mounting relieves cab of all chassis strain.

CLASSIFIED ADVERTISING will get results for you no matter what you "want"

Turn to that page, with rates, at back of this issue.

week as well as 1,000 gallons of aviation gasoline, fighting grade. The gasoline is delivered to underground storage outside the hangar by tank truck.

The National Air Transport, Inc., which carries the mail between New York and Chicago, takes on about 1,000 gallons of gasoline a day at the Cleveland airport, Major Berry said. It is the largest user of gasoline of any of the commercial aeronautical companies.

Oil companies which may seek this new business, must be assured a source of supply because in probably no other industry is such care taken to have motor fuel exact to specification.

THE fighting grade of aviation gasoline has these specifications: Distillation—5 per cent over between 122° and 149° F.; 50° per cent over at 203° F. or lower; 90 per cent at not over 257° F.; 96 at 302° F., and end point not over 329 F. The minimum recovery must be 96 per cent. Doctor and acidity tests are required in addition to corrosion and sulphur as required for U. S. Motor. There shall not be a distillation loss of more than 2 per cent when the residue in the flask is cooled and added to the distillate in the receiver.

The domestic grade of aviation gasoline which is largely used by commercial companies, has these specifications: Distillation—5 per cent over between 122° and 167° F.; 50 per cent at not more than 221° F.; 90 per cent at not more than 311° F.; 96 per cent at not more than 347° F. and end point not more than 374° F. Recovery of not less than 96 per cent is required and not more than 2 per cent distillation loss allowed. Doctor corrosion, acidity and sulfur tests are required.

To the gasoline distributor who is unfamiliar with aviation gasoline there is no initial boiling point in the U. S. Specifications. The first temperature taken is when 5 per cent of the sample has been recovered.

The U. S. government specifies four grades of lubricants for stationary cylinder aircraft engines. The specifications are:

Grade	Flash not under	Viscosity at 210° F	Pour not over	Carbon residue
1	400°	75-85	15°	1.5%
2	400°	90-100	30°	2.0%
3	450°	90-100	45°	2.5%
4	450°	115-125	45°	2.5%

Not more than 0.10 mg. of potassium hydroxide shall be required to neutralize 1g. of oil. The oil must separate completely in one hour from an emulsion with distilled water at 180° F. The precipitation number shall not be greater than 0.5.

The gasoline at the Cleveland airport sells to transient airplanes at 27 cents a gallon. This is 11 cents a gallon premium over the posted service station price of U. S. Motor gasoline without the state tax, which is not applicable to airplane fuel.

Fair? Trade Assn. Is At It Again

CHICAGO, Oct. 7.—Charging that some privately-owned filling stations in Chicago cheat the motoring public, Frank S. Douglas, Jr., styled as chief of the department of investigation of the American Fair Trade Association, began a campaign against motor oil substitution here this week.

The chief result thus far was a seven-inch story under a two-deck head on page 11 of the Chicago Tribune on Sept. 27. It told how a warrant had been obtained for the arrest of Herman Kriaack who runs a filling station at 3925 North Crawford Av., and quoted Mr. Douglas as saying many oil stations save their crankcase drainings in a barrel until the impurities have settled off and then resell it as motor oil.

The first news originated in the office of Arthur Carlsten, assistant state's attorney. The American Fair Trade Association is not listed in the Chicago telephone directory and newspaper men were directed to get in touch with Mr. Douglas at the local office of the Vacuum Oil Co., distributors of Mobil oil, where he is said to have made his headquarters while in town.

Evidence was compiled against the alleged substituters with the use of a false container in an automobile. The driver of the car bought oil, ostensibly for his motor, but the oil found its way to a container which could be sealed and sent to a chemist for analysis.

"It is not the few cents extra which the station owner makes on the oil but the damage that the improper oil does to the machinery of the automobile that interests us," Mr. Douglas told a Tribune reporter from the Vacuum Oil Co. offices.

Fisher to Make Vapor Control Device

TULSA—Announcement was made at the Tulsa exposition that the Fisher Governor Co. has taken over the manufacturing and selling of the Campbell Duplex Tank Vapor Control and the Campbell Presorvac relief valve for oil tanks. The recently developed tank vapor control device is designed to control tank vapors by admitting them to a vacuum line as generated as well as for sending back dry gas as the tank is unloaded or cools down enough to create a partial vacuum. Manufacture and sale of these devices was turned over to the Fisher interests to enable the Campbell organization to devote its time exclusively to natural gasoline work.

FAUCETS! FAUCETS! FAUCETS! FAUCETS! FAUCETS! FAUCETS!

"Kwik-Flo"
"Fast-Flo"
"Max-Flo"

"Push-Pul"
"Skrew"
"Rench"

STEEL DRUM ACCESSORIES CORP.

BUFFALO, NEW YORK

GULF Refining Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York, Houston, Atlanta, Boston, New Orleans, Tampa, Philadelphia, Louisville

REFINERS OF OKLAHOMA TEXAS AND LOUISIANA

PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
PETROLEUM COKE

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS

CUSHING PRODUCTS

SOON the ducks will be flying high . . . the crack of shotguns and the bark of thoroughbred hounds will welcome the hunting season.

Prepare now to hold your winter trade with satisfying Cushing Thoroughbred Products—the kind that bring them back for more.

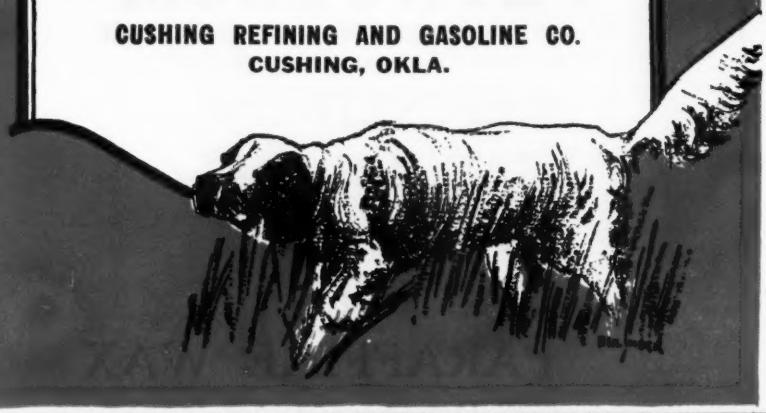
Wire for quotations on any of the following:

58 - 60 U. S. Motor Gasoline
64 - 66 — 375 E. P. Aviation
41 - 43 W. W. Kerosene
36 - 38 Straw Distillate
32 - 36 Gas Oil Uncracked
22 - 26 Fuel Oil (Cushing
24 - 26 Fuel Oil or Blackwell)

PRODUCING
REFINING
TRANSPORTING
MARKETING

Refineries at:
CUSHING and
BLACKWELL,
OKLAHOMA

CUSHING REFINING AND GASOLINE CO.
CUSHING, OKLA.



There is a constant market in used equipment

Take advantage of the savings possible by buying what you need or selling what you don't need.

An advertisement in our classified section costs only $4 an inch with a border and display heading. Without a border 10 cents a word, minimum charge $3.

Tell them your needs in next week's issue.

Supreme Court to Review Braden Tax Case

By Special Correspondent

WASHINGTON, Oct. 10.—A battle for real oil millions, not the kind one reads about in the Sunday supplements, will begin in the Supreme Court of the United States, probably some time this month. The money is in the possession of the United States. The treasury says the amount is "more than $150,000,000." It was collected from lessees, of Osage Indian oil lands in the form of income taxes in the last 10 years.

Federal courts at Pittsburgh and Philadelphia have decided that the money was wrongfully collected from the men who produced oil from the Osage or any other Indian lands and that the government must return it to the tax-paying oil producers. The litigation is known among income tax lawyers and the larger oil producers as the "Braden suits." Technically, in the Supreme Court they are known as Nos. 219 and 220, D. B. Heiner, collector of internal revenue for the twenty third district of Pennsylvania, petitioner vs. The Colonial Trust Co., executor of the will of Glenn T. Braden, deceased; and C. G. Lewellyn, former collector etc. vs. Same.

Braden, the oil man died in September, 1923. The Colonial Trust is the executor of his will. In April, 1925, the trust company sued the two collectors for the recovery of money he had paid, as income tax, for that part of his income derived from the Osage oil lands which he had leased and developed. Ignorant of his legal right, the trust company executor says, Braden paid income tax on the part of his income derived from the Osage oil when as a matter of fact such income was exempt, not only from state but federal income taxes as well.

The trial court gave judgment for the executor for payments made in 1917 to 1921, for $411,127.07, which sum included interest on the taxes wrongfully collected. The circuit court of appeals for the third circuit, at Philadelphia, affirmed the judgment.

Being unwilling to return the money, the government persuaded the Supreme Court to have the papers in the cases sent to it for review. The government did not have the right of appeal. It got to the high court merely because that court thought it should look into the law on the subject and see to it that the courts in all parts of the country made uniform decisions, after it should declare what was the law on the subject of income derived from Indian land oil leases.

Long ago, in a number of suits the courts held that the lessees being agencies of the federal govern-

ment for the recovery of oil from the lands of the Indians, the federal government's wards, could not be taxed by Oklahoma.

The government, in the Braden cases, contends that the income tax laws, from 1916 onward, fail to make any exemption of income derived from Indian oil land leases, from their operation. In behalf of Braden, which, of course means for all oil producers similarly situated, it is claimed that the unbroken policy of congress has been to exempt, from taxes, all operations in connection with the work done by the government, through its agents, for the Indians.

Government to Intervene On Barnett Case

WASHINGTON, Oct. 10.—The government probably will intervene in litigation in Oklahoma begun by Fred T. Hildt, as next friend of Jackson Barnett, a ward of the government and an incompetent Oklahoma Indian, against the Gypsy Oil Co., operating under a lease made by Barnett's guardian. More than $1,000,000 royalties have been paid under the terms of the lease. The government has been asked to intervene in Hildt's suit to defend the legality of the lease made by the Indian's guardian, by which the Gypsy holds title to the land for the production of oil.

Attorney General Sargent has been advised that notice has been served upon the superintendent in charge of the agency of the Five Civilized Tribes at Muskogee, of the institution of the suit, the purpose of the notice being to give the government an opportunity to defend the lease, which was made in 1912. The government, in all matters pertaining to the lease has contended the lease was made for the benefit of Barnett, that the lessees acted in good faith, and that no fraud appears in the procurement of the lease.

As reported to the attorney general the suit attacking the lease arises on account of the action of the supreme court of Oklahoma holding that the appointment of a guardian for Barnett was invalid.

Charles J. Hares, chief geologist of the Ohio-Mexican Oil Corp., stock controlled by the Ohio Oil Co., has moved to California, where the parent company recently has been active in acquiring properties. Mr. Hares calls Denver home, but is generally found about as easily at Casper, Wyo., or Findlay, Ohio, unless his work calls him elsewhere, as in the present instance. He made location for the first oil and gas wells in the Rock Creek, Lance Creek and Mule Creek oil fields, Hidden Dome gas field and the Poison Spider oil and gas field, among others.

"$520.00 Received First 60 Days Operation of Gladish Electric Auto Elevator."

Extract from letter J. W. Roberts Service Station

Make More Money

Let the Gladish Electric Auto Elevator bring you increased business and profits. Now making big money for service stations everywhere. Often doubles and triples lubricating trade. Quick and efficient. It is absolutely safe. Write for complete information about this money making equipment.

American Hoist Corporation

2426 East 14th Street Chattanooga, Tenn.

Salesmen:—Good territory now open. Write us

Warren Electric Grease Extractor

A Big Money Maker for you

IT makes money for you by multiplying your grease sales three times, which incidentally, makes money for the car owner by adding to the life of his car.

It makes money for you by making the job of getting out old grease—all of it—quicker, easier and simpler.

Turn this extractor about, and it will fill the cases with new grease.

The filling station or garage that is trying to get along without the Warren is losing money every day.

Write Today for our Special Free Offer to Oil Companies, Filling Stations and Garages.

The Warren Refining and Chemical Co., Cleveland, O.

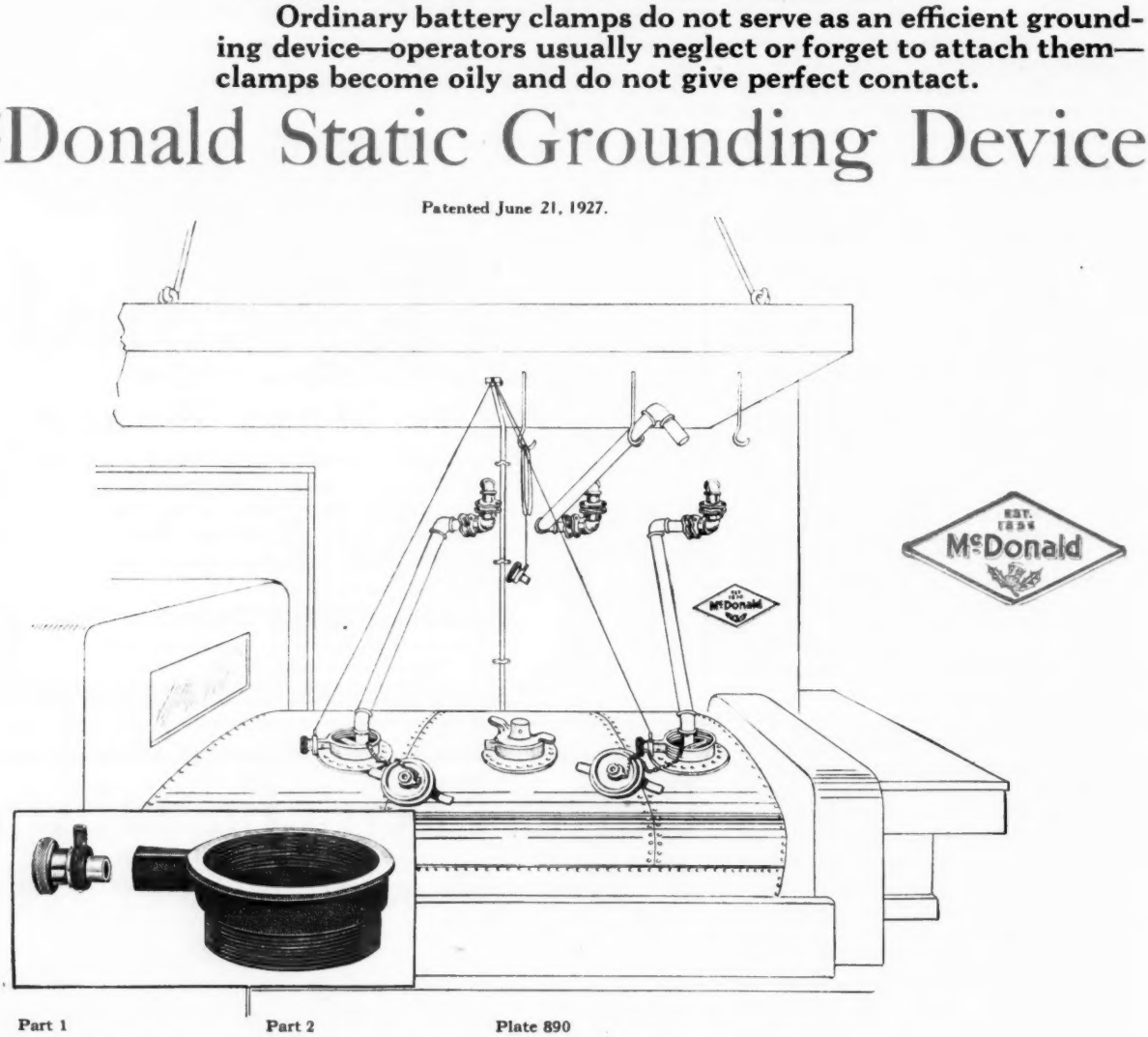
Taking a Chance!

That is what you are doing each time a truck tank is loaded with gasoline without being *properly* grounded.

Ordinary battery clamps do not serve as an efficient grounding device—operators usually neglect or forget to attach them—clamps become oily and do not give perfect contact.

McDonald Static Grounding Device

Patented June 21, 1927.



Part 1 Part 2 Plate 890

A fool-proof arrangement for grounding truck tanks while loading.

Part One, shown in Plate 890, remains permanently attached to ground wire at loading rack, as shown in outline drawing.

Part Two screws into dome opening of truck tank and remains permanently on truck tank.

Dome cover cannot be removed until perfect electric contact is made by screwing Part One into extended arm of Part Two—insures proper grounding.

Fits any truck tank—not necessary to have special cap.

Inexpensive Insurance.

"The Home of The Swing Joint"

A. Y. McDONALD MFG. CO.

DUBUQUE, Iowa.

Omaha Minneapolis Des Moines Kansas City

There's A McDonald Distributor Near You

McDONALD

Consumers Co. of Chicago Selling Furnace Oil

CHICAGO, Oct. 10.—Consumers Co., said to be the world's largest distributor of coal, coke, ice and building material, has launched into the oil business and will sell Stanolind Furnace Oil this winter. The announcement was made through daily newspaper advertising, starting Sept. 18, about a week after contract with the Standard Oil Co. of Indiana for requirements was closed. Consumers Co. will handle only one grade.

Consumers Co. is not building any storage, nor has it purchased any tank trucks to serve its customers. The arrangement is that the Consumers Co. buys oil from the Standard Oil Co. and sells it to its own customers but the Standard Oil Co. stores the oil and delivers it to the consumer in Standard's own trucks. Consumers Co. sells the oil at the same scale of prices observed by the Standard, as follows:

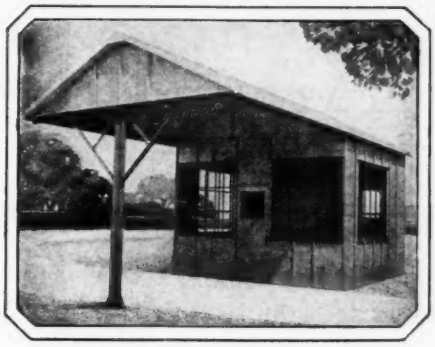
No orders under 50 gallons.
50 to 99 gal., 9c per gal.
100 to 799 gal., 8c " " .
800 gal. and up, 7½c " " .

Consumers Co. has bulk storage tanks for gasoline and operates several tank trucks in the gasoline service, but only does this to service its own motors. The company operates 200 or more big trucks in conducting its coal, ice and building material business and has been buying gasoline in car lots for several years. The company's coal yards and garages are so situated it can accept any desirable business in Chicago and its North Shore suburbs or in Hammond, Ind.

"For years the Consumers Co. has been in the fuel business," Mr. Reed said Friday. "We handle every variety of coal and coke for the fuel buyers of Chicago. Now some of them want to buy oil and there is no reason to exclude it from the rest of the fuel line. We are here to give service. So far we have retained every sizable account of ours that wished to convert from coal to oil fuel.

"Oil burner advocates are already saying we are forced to take on oil because of its general popularity and the inroads it was making in our business, but that is not true. This year is the biggest coal year in the history of Consumers Co. Certainly it is not a matter of being forced into something.

"We elected to sell Stanolind furnace oil because of its quality. It is a 38-40 distillate and runs uniformly to specification. Investigation has convinced us it will burn in any kind of an oil burner and we do not want to handle but one product. We are not going into the industrial fuel oil business. We are preparing to take care of the demand for domestic furnace oil only."



Marion Metal Buildings

With Interlocking Joints

THE PERFECT METAL BUILDING

Send for Complete Catalog 7

MARION MACHINE, FOUNDRY & SUPPLY CO.

MARION, INDIANA, U. S. A.

Quality

REFINING SCIENCE MODERNIZED

SHARPLES PROCESS OILS

Gravity	28½-29	29-29½
Flash	440	430
Viscosity	75 @ 210	60 @ 210
	650 @ 100	385 @ 100
Color	6 plus	5¾
Pour	25/30	25/30

Guaranteed 100% PURE PENNSYLVANIA OIL

FRANKLIN CREEK REFINING CORP.
Franklin, Pa. Permit 34

For Samples and Quotations

W. H. DAUGHERTY & SON REFINING CO
Permit 30 Petrolia, Pa.

SALES OFFICES, 114 FIFTH AVE., NEW YORK

Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

Skelly's Anniversary Picnic

TEN years ago on July 31, according to Skelly News, the first still was fired in the Skelly refinery at El Dorado, Kan. A picnic was suggested to celebrate the anniversary. And it was held too at El Dorado. The picnickers journeyed from Tulsa and Kansas City branch offices in automobiles, to El Dorado, each delegation having about a 200-mile trip, part of the way over almost impassable roads. There were 60 cars from Tulsa and 50 from Kansas City.

A striking fact set forth in the same issue of the magazine is that 35 employes of the refining division of the Skelly company are taking correspondence courses in the evenings to enable them to get ahead faster and further in the world. Most of the ambitious ones are studying courses designed to improve their skill and their value to their employers in the refining of oil.

Importance of Laboratory to Refining

F. J. MECHLIN, chief chemist of the Louisiana Oil Refining Corp., Shreveport, has an article in the August issue of The Loreco Diamond, telling of the important part played by the laboratory in controlling the production of products that meet specifications and also in carrying on research and experimental work.

From the School Into the Refinery

OIL refining companies are appreciating more and more the possibilities that extension of their research and development work may offer and they are drafting more and more men from the research staffs of the universities into the refineries. Just recently the advent of two university men into refinery work was announced in Industrial and Engineering Chemistry. Robert P. Russell, assistant professor of chemical engineering at Massachusetts Institute of Technology has left that position to become director of research for the Standard Oil Co. of Louisiana at Baton Rouge and H. D. Wilde Jr. has left the research laboratory of applied chemistry at the same school to join the development department of the Humble Oil & Refining Co., at Baytown, Tex.

Mr. Russell will be remembered as the joint author with R. T. Haslam of M. I. T. of the book, "Fuels and Their Combustion."

Colonel Stewart Announces Promotion

DR. MAX G. PAULUS, for many years identified with the refining department of the Standard Oil Co. of Indiana, has been appointed manager of the Rocky Mountain division of the company, according to announcement of Colonel Stewart, chairman of the board, published in the September issue of the Stanolind Record. Dr. Paulus succeeds T. S. Cooke as manager of the Rocky Mountain division. Mr. Cooke, the announcement states, has been transferred to other duties.

Government Specifies Motor Oils

WHAT seems a reasonable attitude as to the motor oils for use on government equipment is shown in a recent bulletin sent out by General H. C. Smither, chief co-ordinator of the U. S. Bureau of the Budget to the heads of all government "departments and establishments."

This bulletin is an effort, apparently, to acquaint men in the government service who are responsible for the operation of automotive equipment with the principles of lubrication. It displays very little fear as to damage that may be suffered by automobile engines due to not having just the right grade of oil.

The bulletin does point out, however, that oil of approximately correct viscosity should be used and states that no case has arisen where damage was caused to machinery by the oil used where that oil was of approximately the proper viscosity. The specifications of the Federal Specifications Board and of the Navy Contract Oils are given in their relation to light, medium, heavy, etc. commonly used by the trade. It is pointed out that these terms as used by refiners vary widely and also that "any viscosity within rather wide limits will give reasonably satisfactory performance," and goes on to say, "The recommendations of different refiners for the same make of car differ by as much as 3 to 1 in viscosity," with the presumption that all the various viscosities recommended give reasonably satisfactory performance.

One reason for the very reasonable attitude is doubtless that the specifications and data were prepared by the Bureau of Standards whose experts perhaps know more than any group in the country about motor fuels and motor lubrication.

The Final Chapter of a Refinery

THE last chapter of the Cornplanter refinery at Warren, Pa., is being written. The refinery was dismantled some months ago by the Pure Oil Co. engineers, the plant having been the property of the company for some time. Now the Pure Oil is advertising for sale the equipment, such as boilers, wax presses and so on. It apparently will be one refinery that is entirely wiped out of the picture.

Gasoline Stocks, in Day's Supply, Are Lowest in Five Years

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, Oct. 7

ONLY one month's supply of gasoline at the August rate of demand was held at 332 United States refineries Aug. 31, the Bureau of Mines' petroleum statistics for that month reveals. Stocks reduced to days' supply are the lowest in the last five years.

Gasoline stocks at the 332 refineries, which include practically all the active plants in the United States, totaled 33,455,000 barrels Aug. 31. True, stocks were 198,000 barrels less Sept. 30, 1926, but stocks then were equivalent to a little more than 37 days' supply at the rate of domestic and export demand than current, whereas stocks Aug. 31, last, were equivalent to less than 31 days' supply at the August, 1927, rate of shipments.

Stocks at the end of July represented 37 days' supply at the July rate of demand and the stocks of Aug. 31, 1926, constituted 35 days' supply. With the exception of the stocks Sept. 30, 1926, the available supply at refineries at the end of August was the lowest in volume since Dec. 31, 1924, when the supply was 30,823,000 barrels or 47 days' supply at the rate of demand then current.

Stocks at the end of August were 36.1 per cent lower than at the end of March when the peak of all time was reached at 52,410,000 barrels.

Demand in August, both foreign and domestic, averaged 1,096,000 barrels a day, the largest volume in the history of the oil industry. Domestic demand was virtually on a level with July domestic demand, but exports rose to an average of 135,000 barrels a day, compared with 104,000 barrels average in July.

Output of gasoline was 904,000 barrels daily average, a decline of 3,000 barrels daily average from the record July output, but imports at 11,000 barrels a day, a gain of 5,000 barrels daily average over July imports, brought the new supply of gasoline to a new high record. In spite of this increased supply stocks of gasoline were lowered 5,614,000 barrels in August.

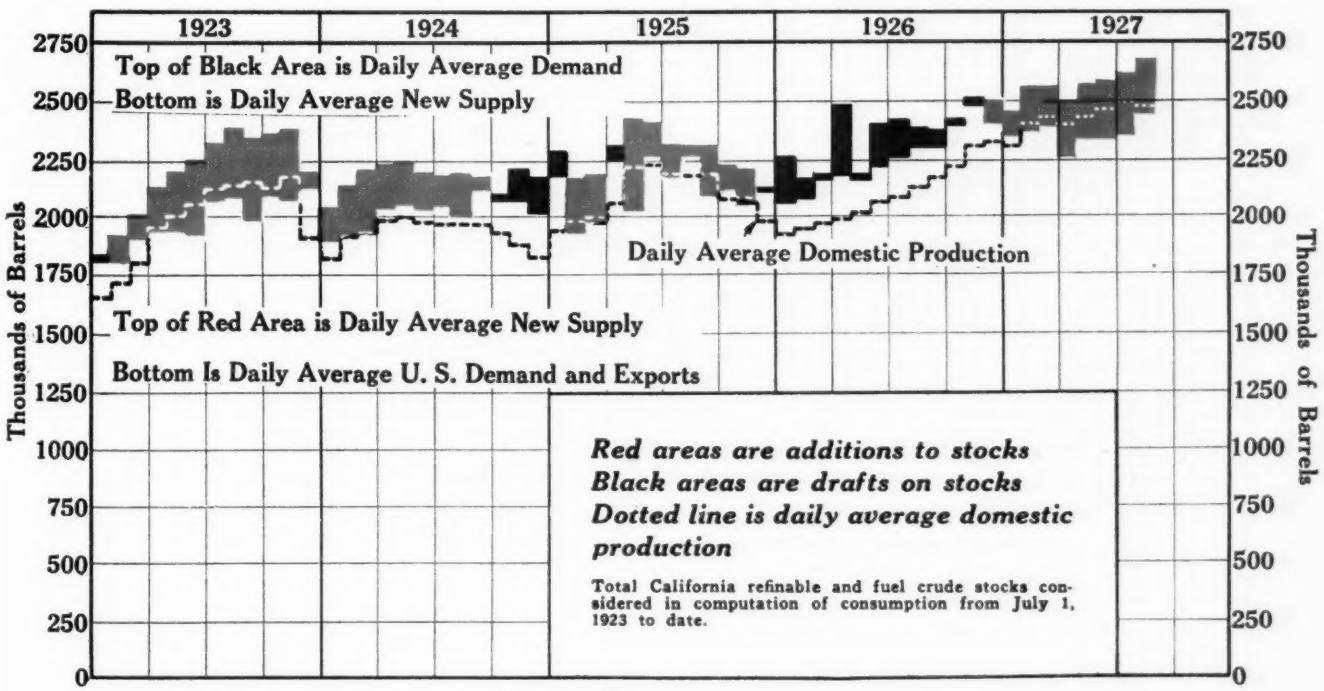
In view of this apparent bullish gasoline situation, gasoline prices did not rally appreciably. Gasoline's inability to gather strength probably can be attributed to the continued high rate of crude oil production, although the latter was lower in August than in July, the steady accumulation of crude oil, and the extreme facility with which manufacture of gasoline can be increased.

Daily average crude production fell 10,800 barrels in August to 2,516,100 barrels. But exports increased 46,400 barrels daily average making the new supply 2,718,100 barrels daily average, the largest volume in the history of the industry. Domestic and foreign demand was only 2,493,000 barrels, daily average so stocks rose 6,974,000 barrels.

The bureau's report reveals these other important points:

1. Increase of only 633,000 barrels

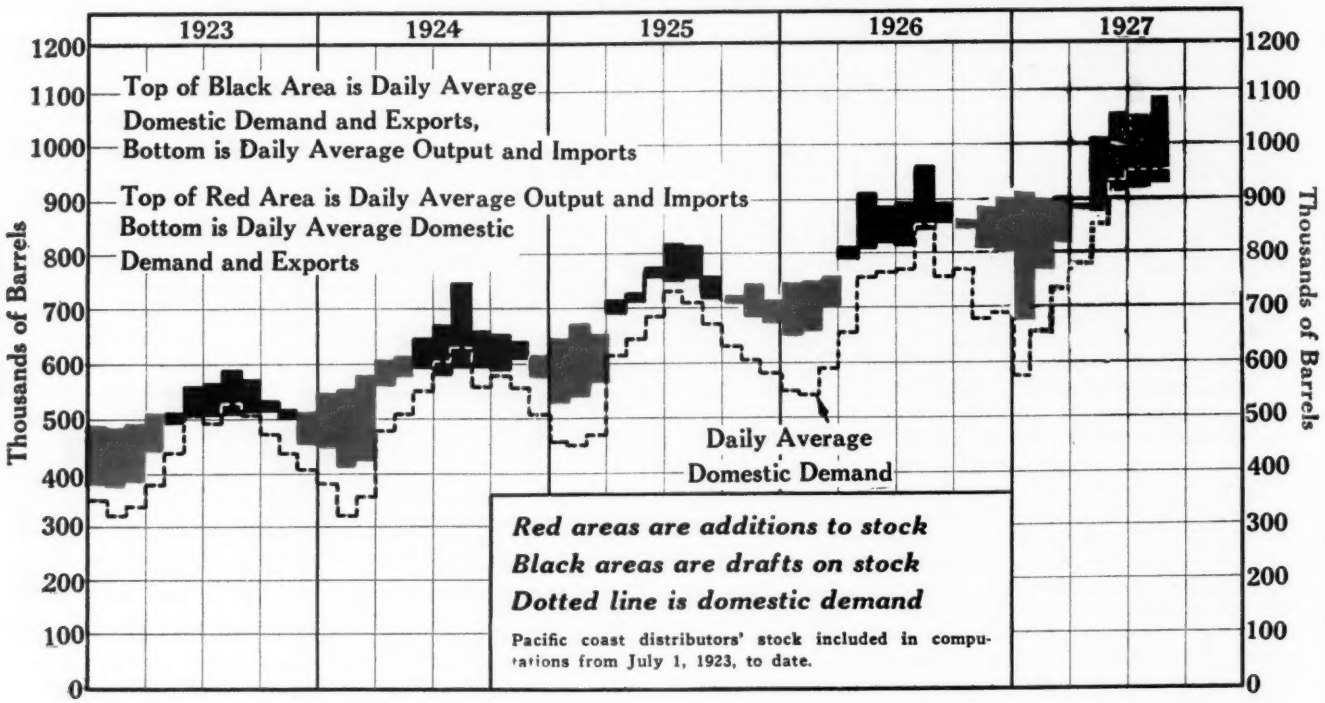
Crude Oil Production and Demand



August domestic production	2,516,100 Bbls.	daily av.
August imports	202,000 Bbls.	daily av.
Total new supply	2,718,100 Bbls.	daily av.
August indicated demand east of California	1,769,400 Bbls.	daily av.
August indicated California deliveries	679,000 Bbls.	daily av.
August exports	44,600 Bbls.	daily av.
Total indicated demand	2,493,000 Bbls.	daily av.

Stocks in pipe lines and at tank farms east of California Aug. 31, 1927	295,384,000 Bbls.
Stocks at refineries east of California	38,030,000 Bbls.
Stocks of foreign crude not at refineries	259,000 Bbls.
California stocks 20 degrees and lighter	23,262,000 Bbls.
California stocks heavier than 20 degrees	91,965,000 Bbls.
Total stocks Aug. 31, 1927	448,900,000 Bbls.
Increase in stocks in August	6,974,000 Bbls.
Stocks Aug. 31, 1926	397,880,000 Bbls.

Gasoline Production and Consumption



August domestic output	904,000 Bbls. daily av.	August exports	135,000 Bbls. daily av.
August imports	11,000 Bbls. daily av.	Total indicated demand	1,096,000 Bbls. daily av.
Total new supply	915,000 Bbls. daily av.	Stocks Aug. 31, 1927	33,455,000 Bbls.
August domestic shipments	961,000 Bbls. daily av.	Decrease in stocks in August	5,614,000 Bbls.
		Stocks Aug. 31, 1926	34,421,000 Bbls.

in above-ground stocks of all oils.

2. Decrease of 6,001,000 barrels in stocks of all refined oils.

3. Decrease of 340,000 barrels in stocks of natural gasoline.

4. Decrease of 2,039,000 barrels in stocks of light California crude and increase of 270,000 barrels in stocks of heavy California crude.

5. Increase of 9,693,000 barrels in stocks of light crudes east of California and decrease of 950,000 barrels in stocks of heavy crudes.

6. Decrease of 665,000 barrels in kerosene stocks when domestic demand attains the largest volume since last January.

7. Small decrease in stocks of lubricants although a fall in export demand more than offset an increase in domestic shipments.

8. Decrease of 10,856,000 pounds in stocks of paraffin wax when output was the lowest since October, 1924, and exports the largest since February, 1924. These two factors overcame a sharp fall in domestic demand.

9. Stocks of gasoline and fuel oils east of California increased 1,456,000 barrels.

10. Slight decrease in charges to stills, rather large increase in charges of unfinished oils failing to overcome smaller crude runs.

An encouraging feature of the August report was the decline in the daily average excess of new supply of all oils over daily average demand to 21,000 barrels. In July the excess was 257,000 barrels and in June 136,000 barrels. However, until production is further curtailed, there may be a rise in the volume of excess supply the remainder of this year. In August, 1926, there was a deficiency of 190,000 barrels daily average in the new supply of all oils.

The new supply of all oils averaged 2,854,000 barrels daily in August, an increase of 14.1 per cent over the 2,501,000 barrels daily average new supply in August, 1926. The daily average demand was 2,833,000 barrels in August, 1927, an increase of 5.2 per cent over the 2,691,000 barrels daily average demand in August, 1926. Stocks of all oils Aug. 31, 1927, were 53,430,000 barrels, or 103 per cent, more than stocks Aug. 31, 1926.

Texas was the only state in which crude oil production increased much in August over July production. The rise in Texas production was 14,200 barrels daily average. West Virginia reported an increase of 2,600 barrels in its average production but 1,300 barrels was the largest gain elsewhere.

Oklahoma recovery was down 18,700

Petroleum Supply and Demand — Barrels

	Aug., 1927	*July, 1927	June, 1927	Aug., 1926
Domestic Crude production: Light	68,765,000	68,866,000	65,335,000	54,558,000
Heavy	9,233,000	9,467,000	9,203,000	12,451,000
Imports of crude oil	6,261,000	4,824,000	4,019,000	5,332,000
Imports of refined oil	774,000	1,053,000	1,448,000	2,361,000
Natural Gasoline	3,214,000	3,119,000	3,093,000	2,664,000
Benzol	214,000	214,000	210,000	179,000
Total new supply all oils	88,461,000	87,543,000	83,308,000	77,545,000
Total stocks end of preceding month	571,418,000	563,466,000	559,386,000	524,506,000
Total supply of all oils	659,879,000	651,009,000	642,694,000	602,051,000
Exports of crude oil	1,382,000	1,089,000	1,410,000	1,083,000
Exports of refined oil	11,743,000	10,057,000	11,307,000	10,709,000
Domestic demand, crude and refined	74,703,000	68,445,000	66,511,000	71,638,000
Total demand	87,828,000	79,591,000	79,228,000	83,430,000
Total stocks of all oils end of month	572,051,000	571,418,000	563,466,000	518,621,000
Increase in stocks	633,000	7,952,000	4,071,000	†5,885,000
Daily average new supply	2,854,000	2,824,000	2,777,000	2,501,000
Daily average demand	2,833,000	2,567,000	2,641,000	2,691,000
Daily average excess of supply	21,000	257,000	136,000	††190,000
Crude stocks:				
East of California: Light	287,465,000	277,772,000	268,217,000	220,240,000
Heavy	46,208,000	47,158,000	47,485,000	57,719,000
In California: Light	23,262,000	25,301,000	26,898,000	32,149,000
Heavy	91,965,000	91,695,000	90,516,000	87,772,000
Total stocks of crude	448,900,000	441,926,000	433,116,000	397,880,000
Total stocks of refined	122,499,000	128,500,000	129,379,000	120,151,000
Stocks of natural gasoline	652,000	992,000	971,000	590,000

*Revised †Decrease ††Daily average deficiency

Serving the Industry with SPEED

HUGHES SELF-CLEANING CONES

Speed in getting the hole down is essential to Drilling Economy.

Since the inception of Hughes "Self-Cleaning" Cones, Operators and Contractors in the Rotary fields throughout the world have been able to cut their drilling costs per well a worthwhile extent.

"Sold by Supply Stores Everywhere"

HUGHES TOOL COMPANY

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Main Office and Plant
Houston, Texas

Export Office
Woolworth Bldg.
New York City

barrels daily average to 847,800 barrels daily. California's production was down 1,300 barrels to 621,900 barrels daily average. Oklahoma's production was 370,300 barrels daily average more than production in August, 1926; Texas' was only 69,200 barrels more, and California's only 16,600 barrels more.

The rise in production in the entire Mid-Continent field was not so large in August over July, being only 7,400 barrels daily average. Production in the Appalachian field rose 6,300 barrels daily average.

In the first eight months of 1927 Mid-Continent production totaled 357,758,000 barrels, a gain of 89,920,000 barrels or 33.5 per cent. In the entire United States the increase in production in the first eight months of 1927 over production in the corresponding months of 1926 was 101,475,000 barrels, or 20.5 per cent. The total production of 594,387,000 barrels in the first eight months of this year indicates that total domestic production will approximate 900,000,000 barrels this year unless the Texas fields run wild. The 900,000,000 figure roughly allows for the gradual decline of the Seminole pools.

The Seminole pool, according to the bureau, had net production of 437,000 barrels a day in August, compared with 490,000 barrels in July. This oil was of 41° gravity. The Panhandle district averaged 102,000 barrels compared with 115,000 barrels in July. This oil was 36° gravity. Seal Beach production averaged 58,000 barrels, a decline of only 1,000

Crude Oil Stocks—By Months

(Thousands of Barrels)

1926	East of Calif.	†In Calif.	Total U. S.
January	291,400	130,841	422,241
February	287,975	131,638	419,613
March	287,710	131,678	419,388
April	286,208	124,290	410,498
May	284,009	125,359	409,368
June	281,432	122,794	404,533
July	278,184	121,344	399,528
August	277,486	119,893	397,379
September	277,771	117,964	395,735
October	277,014	117,928	394,942
November	277,099	117,497	394,596
December	278,077	118,131	396,208
1927			
January	278,972	118,988	397,673
February	285,458	117,410	402,868
March	290,110	117,454	407,564
April	297,895	117,843	415,738
May	307,016	117,432	424,448
June	315,702	117,414	433,116
July	324,930	116,996	441,926
August	333,673	115,227	448,900

†Includes heavy fuels.

Crude Production — Barrels

(Daily Averages)

States	August 1927	July 1927	August 1926
Arkansas	104,200	107,200	158,900
California	621,900	623,200	605,300
Colorado	7,400	7,800	8,700
Illinois	19,500	18,500	21,600
Indiana	2,400	2,300	2,200
Kansas	106,400	108,200	118,400
Kentucky	19,800	19,000	17,500
Louisiana	60,100	59,500	65,900
Michigan	1,300	1,200	200
Montana	14,700	15,000	25,000
New Mexico	2,600	2,800	4,500
New York	6,400	5,900	5,400
Ohio	21,400	20,200	20,300
Oklahoma	847,800	866,500	477,500
Pennsylvania	26,900	25,700	25,300
Tennessee	300	200	100
Texas	578,600	564,400	509,400
West Virginia	18,400	15,800	16,300
Wyoming	56,000	63,500	63,500
Total U. S.	2,516,100	2,526,900	2,146,000
CLASSIFICATION BY GRAVITY			
24° A. P. I. and lighter	2,218,200	2,221,500	1,747,100
Heavier than 24°	297,900	305,400	398,900

Stocks of Crude Oil

Domestic unless otherwise specified. Amounts in Thousands of Barrels

AT REFINERIES

Districts	August 1927	July 1927	August 1926
East Coast			
Domestic	9,401	8,999	8,754
Foreign	3,029	2,671	3,078
Appalachian	1,783	1,785	1,659
Indiana, Illinois, etc.	2,746	2,561	1,844
Oklahoma, Kans., etc.	4,400	4,428	2,889
Texas: Inland	1,463	1,450	1,010
Texas Gulf Coast:			
Domestic	6,758	6,657	7,029
Foreign	203	226	371
Ark. and inland Louis.	448	454	715
Louisiana Gulf Coast:			
Domestic	5,126	4,559	7,060
Foreign	1,288	1,373	1,111
Rocky Mountain	1,385	1,382	1,462
U. S. East of Calif.	38,030	36,545	36,982

AT TANK FARMS, IN PIPE LINES AND ELSEWHERE THAN REFINERIES

Appalachian	6,962	6,855	6,962
Kentucky	1,176	1,198	1,481
Lima-Indiana	946	900	731
Ill.,-S. W. Indiana	12,184	12,184	11,451
Okla., Kans., Texas except Coastal	201,977	194,085	135,089
N. La.,-Ark.	27,099	27,792	37,100
Gulf Coast	17,625	17,696	17,300
Rocky Mountain	27,415	27,377	30,335
East of Calif. pipe line, tank farm stocks	295,384	288,087	240,449
Foreign Crude:			
Atlantic Ports	39	42	75
Gulf Ports	220	256	453
Total refinery, pipe line, and tank farm stocks east of Calif.	333,673	324,930	277,959
California:			
20° and lighter	23,262	25,301	32,149
Heavier than 20°	91,965	91,695	87,772
GRAND TOTAL	448,900	441,926	397,880
CLASSIFICATION BY GRAVITY			
(Elsewhere than refineries east of California)			
24° and lighter	287,465	277,772	220,240
Heavier than 24°	46,208	47,158	57,719

Crude Oil Production by Fields — Barrels

Fields	August Daily Average 1927	July Daily Average 1927	August Daily Average 1926	Total Jan.-Aug. 1927	Total Jan.-Aug. 1926
Appalachian	88,400	82,100	79,600	20,318,000	18,809,000
Lima-Indiana	5,100	5,000	5,700	1,267,000	1,393,000
Michigan	1,300	1,200	200	293,000	25,000
Ill.-S. W. Indiana	21,600	20,500	23,400	5,221,000	5,641,000
Mid-Continent	1,567,600	1,575,000	1,176,100	357,758,000	267,838,000
Gulf Coast	129,500	130,800	154,000	33,904,000	25,006,000
Rocky Mountain	80,700	89,100	101,700	20,843,000	26,409,000
California	621,900	623,200	605,300	154,783,000	147,791,000
U. S. Total	2,516,100	2,526,900	2,146,000	594,387,000	492,912,000
Imports	202,000	*155,600	172,000	36,853,000	42,142,000
Total new supply crude	2,718,100	2,682,500	2,318,000	631,240,000	535,054,000

*Revised.

Gasoline Situation by Districts—Barrels

Districts	August Daily Avg. Output	July Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 31, 1927	Stocks July 31, 1927	Stocks August 31, 1926	Districts
East Coast	129,710	126,290	+ 2.71	170,065	182,419	— 6.77	5,364,000	6,615,000	7,460,000	East Coast
Appalachian	34,903	32,161	+ 8.53	36,226	35,355	+ 2.46	792,000	833,000	675,000	Appalachian
Ind., Ill., etc.	122,613	129,323	— 5.19	139,323	135,613	+ 2.74	4,146,000	4,664,000	3,737,000	Ind., Ill., etc.
Okla., Kans., etc.	162,968	158,484	+ 2.83	179,290	174,806	+ 2.57	2,652,000	3,158,000	2,753,000	Okla., Kans., etc.
Texas	194,161	191,355	+ 1.47	242,935	202,935	+19.71	4,317,000	5,829,000	3,248,000	Texas
Louisiana and Ark.	68,065	67,419	+ 0.96	78,032	86,290	— 9.57	1,853,000	2,162,000	3,026,000	Louisiana and Ark.
Rocky Mountain	30,613	38,581	—20.65	62,548	55,516	+12.67	2,980,000	3,970,000	3,781,000	Rocky Mountain
California	160,516	163,419	— 1.78	176,226	185,677	— 5.09	11,351,000	11,838,000	9,871,000	California
U. S. Total	903,549	907,032	— 0.38	1,084,645	1,058,611	+ 2.46	33,455,000	39,069,000	34,551,000	U. S. Total
Texas Gulf Coast	152,452	149,452	+ 2.01	196,935	157,677	+24.90	3,728,000	5,107,000	2,871,000	Texas Gulf Coast
La. Gulf Coast	53,065	53,484	— 0.78	62,032	72,290	—14.19	1,752,000	2,050,000	2,951,000	La. Gulf Coast

Natural Gasoline and Motor Blends—Barrels

Districts	Daily Avg. Production August (net)	Daily Avg. Production July (net)	Stocks End of August	Stocks End of July	Motor Fuel Blends Made In August	Motor Fuel Blends Made In July	Stocks of Blends End of August	Stocks of Blends End of July	Districts
Appalachian	4,378	4,147	60,905	72,548	8,214	8,429	5,905	6,738	Appalachian
Ind., Ill., etc.	922	845	7,286	11,929	643	643	381	381	Ind., Ill., etc.
Okla., Kans., etc.	37,404	37,020	253,452	476,428	138,048	153,667	18,238	16,333	Okla., Kans., etc.
Texas	20,891	19,585	254,976	362,929	30,405	30,786	5,452	5,738	Texas
Louisiana and Ark.	5,607	5,376	29,810	23,905	12,381	11,595	5,024	4,024	Louisiana and Ark.
Rocky Mountain	2,995	3,149	16,000	12,881	2,690	2,738	2,905	3,143	Rocky Mountain
Total east of Calif.	72,197	70,122	622,429	960,620	192,381	207,858	37,905	36,357	Total east of Calif.
California	31,490	30,492	30,000	31,524	.....	.....	48	24	California
U. S. Total	103,687	100,614	652,429	992,144	.....	.....	37,953	36,381	U. S. Total

barrels from the average July production. Seal Beach crude averaged 24° gravity.

Crude oil stocks east of California increased for the eleventh consecutive month. Total California stocks fell for the fifth consecutive month. Stocks held by refiners east of California were increased 1,485.000 barrels to 38,030,000 barrels. Total stocks of heavy crudes east of California were decreased 1,050,000 barrels, but stocks

Kerosene Situation by Districts—Barrels

Districts	August Daily Avg. Output	July Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 31, 1927	Stocks July 31, 1927	Stocks August 31, 1926	Districts
East Coast	27,323	27,935	— 2.19	28,581	21,484	+33.03	1,750,000	1,789,000	1,635,00	East Coast
Appalachian	10,065	10,194	— 1.27	10,387	9,032	+15.0	326,000	336,000	237,000	Appalachian
Ind., Ill., etc.	13,871	17,097	—18.87	15,355	10,710	+43.37	873,000	919,000	609,000	Ind., Ill., etc.
Okla., Kans., etc.	24,677	24,871	— 0.78	25,516	21,355	+19.48	616,000	642,000	362,000	Okla., Kans., etc.
Texas	34,065	33,065	+ 3.02	39,516	31,677	+24.75	1,541,000	1,710,000	1,971,000	Texas
Louisiana and Ark.	13,903	14,065	— 1.15	18,581	17.774	+ 4.54	1,251,000	1,396,000	1,578,000	Louisiana and Ark.
Rocky Mountain	4,484	5,452	—17.75	7,903	5,323	+48.47	216,000	322,000	278,000	Rocky Mountain
California	14,194	11,968	+18.60	18,194	12,097	+50.40	1,800,000	1,924,000	1,517,000	California
U. S. Total	142,582	144,647	— 1.43	164,033	129,452	+26.71	8,373,000	9,038,000	8,186,000	U. S. Total
Texas Gulf Coast	27,645	27,194	+ 1.66	29,355	24,355	+20.53	1,279,000	1,332,000	1,690,000	Texas Gulf Coast
La. Gulf Coast	12,065	12,129	— 0.53	16,548	15,806	+ 4.69	1,218,000	1,357,000	1,554,000	La. Gulf Coast

Lubricants Situation by Districts—Barrels

Districts	August Daily Avg. Output	July Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 31, 1927	Stocks July 31, 1927	Stocks August 31, 1926	Districts
East Coast	29,097	26,839	+ 8.41	28,806	26,516	+ 8.64	2,562,000	2,553,000	2,558,000	East Coast
Appalachian	12,871	11,548	+11.46	12,613	12,645	— 0.25	960,000	952,000	942,000	Appalachian
Ind., Ill., etc.	9,839	10,194	— 3.48	10,194	10,323	— 0.25	664,000	675,000	627,000	Ind., Ill., etc.
Okla., Kans., etc.	6,387	6,323	+ 1.01	6,806	7,355	— 7.46	400,000	413,000	377,000	Okla., Kans., etc.
Texas	20,613	21,548	— 4.34	19,290	25,032	—22.94	1,837,000	1,796,000	1,558,000	Texas
Louisiana and Ark.	1,516	1,774	—14.54	1,548	1,839	—15.82	107,000	108,000	103,000	Louisiana and Ark.
Rocky Mountain	1,677	1,613	+ 3.97	2,258	1,774	+27.28	104,000	122,000	166,000	Rocky Mountain
California	6,774	6,355	+ 6.59	7,419	4,968	+49.34	857,000	877,000	895,000	California
U. S. Total	88,774	86,194	+ 2.99	88,934	90,452	— 1.68	7,491,000	7,496,000	7,226,000	U. S. Total
Texas Gulf Coast	19,323	20,419	— 5.37	18,290	24,000	—23.79	1,785,000	1,753,000	1,516,000	Texas Gulf Coast
La. Gulf Coast	1,484	1,774	—16.35	1,516	1,839	—17.56	107,000	108,000	101,000	La. Gulf Coast

Gas and Fuel Oil—Situation by Districts—Barrels

Districts	August Daily Avg. Output	July Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 31, 1927	Stocks July 31, 1927	Stocks August 31, 1926	Districts
East Coast	223,645	201,032	+11.25	192,290	153,065	+25.63	9,889,000	8,917,000	6,985,000	East Coast
Appalachian	19,645	17,839	+10.12	20,226	16,871	+19.89	878,000	896,000	693,000	Appalachian
Ind., Ill., etc.	66,194	63,000	+ 5.07	56,290	54,226	+ 3.81	1,852,000	1,545,000	1,526,000	Ind., Ill., etc.
Okla., Kans., etc.	98,839	102,097	— 3.19	90,452	83,581	+ 8.22	5,501,000	5,241,000	5,247,000	Okla., Kans., etc.
Texas	188,387	194,194	— 2.99	184,258	188,387	— 2.19	8,500,000	8,372,000	8,080,000	Texas
Louisiana and Ark.	76,999	76,548	+ 0.59	82,839	86,516	— 4.25	3,091,000	3,272,000	2,473,000	Louisiana and Ark.
Rocky Mountain	19,935	19,032	+ 4.74	20,323	16,903	+20.23	635,000	647,000	1,496,000	Rocky Mountain
California	406,290	413,129	— 1.66	.....	.....	.....	.....	.....	.....	California
U. S. Total	1,099,934	1,086,871	+ 1.20	1,052,968	1,012,677	+ 3.98	30,346,000	28,890,000	26,500,000	U. S. Total
Texas Gulf Coast	143,226	145,935	— 1.86	141,194	144,839	— 2.52	6,853,000	6,790,000	7,003,000	Texas Gulf Coast
La. Gulf Coast	40,323	40,645	— 0.79	45,935	46,710	— 1.66	2,498,000	2,672,000	1,742,000	La. Gulf Coast

Coke, Asphalt, Miscellaneous Products

	Coke Output (Tons)	Coke Stocks (Tons)	Asphalt Output (Tons)	Asphalt Stocks (Tons)	Miscel. Products Output (Bbls.)	Miscel. Products Stocks (Bbls.)	Unfin. Oil Output (Bbls.)	Unfin. Oil Stocks (Bbls.)	Losses (Bbls.)	
January, 1926	73,701	230,566	162.383	174 564	491.652	1.063.619	2,097,000	37,880,000	1,995,000	January, 1926
February	64,105	210,247	152,468	182,063	481,428	1.073,238	2,340,500	28,808,000	1,767,000	February
March	80,689	219,820	210,596	195,052	597,810	1.217,119	2,195,928	39,098,000	2,059,000	March
April	76,031	216,163	198,598	239,953	572,381	1.138,095	2,481,952	38,785,000	1,982,000	April
May	79,982	234,025	248,3 0	22 ,819	779,310	1.210,428	2,756,024	38,681,000	2,270.000	May
June	81,326	246,707	300,970	200.881	784,476	1,010.381	2,767,000	40,081.000	2,308,000	June
July	83,358	260,727	281,196	184,853	800,310	897,452	2,927.214	38,527.000	2.419.000	July
August	89,100	277,668	305,944	200,175	733,000	858,000	2.848.000	39,822,000	2,605,000	August
September	95,111	287,546	308,572	188,512	749,000	835,000	2,721,000	39,500,000	2,492,000	September
October	87,946	287,354	323,348	187,845	738,000	863,000	2,790,000	40,006,000	2,437,000	October
November	91,459	285,905	215,973	166,788	661,000	1,030,000	2,455,000	38,770,000	2,267,000	November
December	92,500	290,582	213,697	193,331	644,000	1,100,000	2,399,000	38,829,000	2,288,000	December
1926, Total	995,308	.....	2,922,788	.....	8,030,000	.....	31,240,000	.....	26,928,000	1926, Total
January, 1927	92,914	287,394	191.180	215,337	511,000	1,189,000	2,473,000	39.287.000	2,367,000	January, 1927
February	88,102	294,682	172,685	234,450	546,000	1,282.000	2,729,000	38,986.000	2,091.000	February
March	98,163	325,521	222,309	235.251	525,000	1,356,000	2,412,000	39.392.000	2,369,000	March
April	88,404	318,529	273,767	219,502	561,000	1,410.000	1,978 000	38,095.000	2.237.000	April
May	87,900	329.400	31 ,000	222,500	599,000	1,368.000	1,80 ,000	37,760.000	2,599.000	May
June	95,300	293,100	347,100	232,400	677,000	1,180,000	2,283,000	38,192,000	2,487.000	June
July	90,400	305.800	334,700	214,100	747,000	928,000	2,490,000	3 ,647,000	2,516,000	July
August	94,800	303,600	339,500	192,200	743,000	879,000	1,955,000	38,711,000	2,598,000	August

Daily Average Runs to Stills—All Oils—Barrels

	East Coast	Appala.	Ind.-Ill.	Okla.-Kans.	Texas	La.-Ark.	Rocky Mt.	Calif.	Total U. S.	
January, 1926	334.742	73,516	185,709	261.903	426.129	196,484	87,548	558,097	2.120,900	January, 1926
February	360,036	78,428	192,964	256,857	434.674	200.357	96,250	549.821	2.169,400	February
March	369,032	74,677	187,419	250.742	422.774	203.839	98,355	563.228	2.176,500	March
April	365,400	77,133	203 033	266.000	451.667	205.867	98,733	557.900	2.225,200	April
May	373,516	81.677	211.065	293.903	431.451	199.161	101.322	588,613	2.280.700	May
June	382.800	85,433	211,467	293.267	446.867	207,433	107.033	574,033	2.308.300	June
July	418.742	83.097	210.193	292.645	448.516	206.839	102,355	575,193	2.337,600	July
August	395.935	87.613	208,677	300.484	446.484	211 129	106.903	599,645	2.356.900	August
September	404.600	86.667	212,300	300.167	452.900	213.000	109,333	607.867	2.386.833	September
October	427.935	87.645	208,710	279,645	482.935	210.612	113.323	587.645	2.398.500	October
November	462.200	86,567	214.600	288.800	480.466	209.033	108.566	585,633	2.435.866	November
December	442.968	84.838	209.355	284.516	516.354	226.903	102.613	589.322	2.456.870	December
January, 1927	408,355	82,581	206.226	278.258	517.160	228.516	103,161	616,516	2.440.774	January, 1 27
February	412,714	86.928	197,785	295,964	504.642	228.107	103.321	633,108	2.462.571	February
March	439,387	83.097	209,161	283,548	479.806	224.903	103.290	597,839	2.421.032	March
April	411,367	84.400	204.067	286,067	491,567	224.400	100.500	615,333	2.417,701	April
May	413,516	82.000	226.677	293,581	494.806	212 129	75.839	618,452	2.417.000	May
June	429,967	85,400	238,067	301,733	490,633	199,933	87,300	605,733	2,438,766	June
July	439,871	80,935	250,387	317.129	482,839	199,194	87.226	633,012	2,490,613	July
August	465,839	86,065	237,194	319,516	481,032	202,226	76,032	618,516	2,486,420	August

TRIPLEXD GASOLINE HOSE

All sizes and lengths of Triplexd Hose are carried in stock in these cities:

MEMPHIS: 245 Monroe Ave.
JACKSONVILLE: Dixie Culvert & Metal Co.
ATLANTA: P. O. Box 1343
RICHMOND: P. O. Box 514
BROOKLYN: 236 Tillary St.
BOSTON: 142 Berkeley St.
PITTSBURGH: 341 Second Avenue
CLEVELAND: 1302 Ontario Street, North
CINCINNATI: 450 East Pearl Street
DETROIT: 5459 Grand River Avenue
ST. LOUIS: 1621 Pine Street
KANSAS CITY: 13th Street and Eastern Ave.
CHICAGO: 1213 W. Washington Blvd.
SAN ANTONIO: 1401 South Flores Street
HOUSTON: 700 N. San Jacinto Street
EL PASO: 1020 East Overland Street
NEW ORLEANS: 211 South Peters Street
MINNEAPOLIS: 900 Sixth Ave., S. E.
DENVER: 4800 York Street
SAN FRANCISCO: 873 Mills Building
LOS ANGELES: 1625 South Hill Street
SEATTLE: 67 Columbia St.
OMAHA: 13th & Willis Sts.
TORONTO, CAN.: Dunlop Tire & Rubber Goods Company, Limited
LONDON, ENG.: J. Bazley-White, 3 Love Lane, Eastcheap, E. C. 3

METAL HOSE & TUBING CO. INCORPORATED
236 Tillary Street
BROOKLYN, N.Y.

Gasoline Demand and Supply—Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1926	23,208,000	384,000	3,361,000	17,582,000	41,524,000
February	21,259,000	408,000	3,245,000	15,814,000	44,132,000
March	23,868,000	517,000	3,094,000	19,302,000	46,121,000
April	24,296,000	454,000	4,256,000	20,848,000	45,767,000
May	25,271,000	621,000	4,530,000	24,213,000	42,916,000
June	24,946,000	464,000	3,744,000	23,803,000	40,779,000
July	25,504,000	460,000	3,702,000	24,752,000	38,289,000
August	25,942,000	674,000	3,572,000	26,912,000	34,421,000
September	25,360,000	258,000	3,853,000	22,929,000	33,257,000
October	26,337,000	874,000	2,783,000	23,973,000	33,712,000
November	26,245,000	486,000	3,920,000	20,618,000	35,905,000
December	27,498,000	452,000	3,413,000	21,419,000	39,023,000
1926 Total	299,734,000	6,052,000	43,473,000	262,165,000	.....
January, 1927	27,960,000	520,000	3,557,000	17,888,000	46,058,000
February	25,024,000	416,000	3,544,000	18,240,000	49,714,000
March	27,886,000	493,000	3,219,000	22,646,000	52,410,000
April	26,577,000	377,000	3,614,000	23,371,000	52,379,000
May	26,787,000	490,000	4,468,000	26,579,000	48,609,000
June	26,616,000	590,000	4,248,000	27,799,000	43,768,000
July	28,118,000	190,000	3,223,000	29,784,000	39,069,000
August	28,010,000	348,000	4,193,000	29,779,000	33,455,000

Kerosene, Lubes, Wax, Fuel and Gas Oils

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
KEROSENE (Bbls.)					
January, 1926	5,122,000	.....	1,871,000	3,521,000	6,851,000
February	4,746,000	1,000	1,577,000	3,166,000	6,855,000
March	5,516,000	1,000	1,876,000	3,492,000	7,004,000
April	5,037,000	1,000	1,760,000	3,268,000	7,014,000
May	5,210,000	4,000	1,623,000	3,227,000	7,378,000
June	5,009,000	3,000	1,601,000	2,908,000	7,881,000
July	4,877,000	21,000	1,612,000	2,733,000	8,434,000
August	5,162,000	20,000	2,689,000	2,731,000	8,196,000
September	5,207,000	21,000	1,843,000	3,419,000	8,162,000
October	5,126,000	3,000	1,818,000	3,235,000	8,238,000
November	5,357,000	.....	1,943,000	3,592,000	8,060,000
December	5,399,000	.....	1,847,000	3,037,000	8,575,000
1926 Total	61,768,000	75,000	22,060,000	38,329,000	.....
January, 1927	5,113,000	.....	1,616,000	3,882,000	8,190,000
February	4,453,000	1,000	1,399,000	2,590,000	8,655,000
March	4,802,000	3,000	1,351,000	3,356,000	8,753,000
April	4,608,000	1,000	1,861,000	2,776,000	8,725,000
May	4,663,000	1,000	1,633,000	3,188,000	8,568,000
June	4,308,000	2,000	1,616,000	2,695,000	8,567,000
July	4,484,000	.....	1,376,000	2,637,000	9,038,000
August	4,420,000	4,000	1,700,000	3,389,000	8,373,000
LUBRICANTS (Bbls.)					
January, 1926	2,648,000	2,000	727,000	1,632,000	7,544,000
February	2,448,000	1,000	789,000	1,294,000	7,910,000
March	2,646,000	4,000	740,000	2,180,000	7,640,000
April	2,692,000	3,000	928,000	2,039,000	7,368,000
May	2,863,000	11,000	717,000	1,869,000	7,656,000
June	2,681,000	3,000	984,000	2,042,000	7,314,000
July	2,831,000	1,000	747,000	2,071,000	7,328,000
August	2,648,000	2,000	660,000	2,092,000	7,226,000
September	2,645,000	2,000	705,000	2,019,000	7,149,000
October	2,768,000	2,000	704,000	1,778,000	7,437,000
November	2,724,000	1,000	820,000	1,722,000	7,620,000
December	2,699,000	1,000	917,000	1,827,000	7,576,000
1926 Total	32,293,000	33,000	9,438,000	22,565,000	.....
January, 1927	2,570,000	81,000	864,000	1,496,000	7,867,000
February	2,345,000	.....	620,000	1,231,000	8,361,000
March	2,754,000	149,000	895,000	2,334,000	8,035,000
April	2,615,000	1,000	763,000	1,712,000	8,176,000
May	2,625,000	1,000	863,000	1,928,000	8,011,000
June	2,571,000	1,000	758,000	2,197,000	7,628,000
July	2,672,000	*.....	993,000	*1,811,000	7,496,000
August	2,752,000	1,000	754,000	2,004,000	7,491,000

*Revised

WAX (Pounds)					
January, 1926	53,015,000	632,000	29,061,000	18,204,000	122,773,000
February	50,307,000	668,000	28,709,000	21,075,000	123,964,000
March	55,714,000	456,000	25,005,000	24,788,000	130,341,000
April	55,371,000	647,000	31,560,000	18,715,000	136,084,000
May	56,135,000	213,000	23,968,000	19,068,000	149,396,000
June	50,673,000	833,000	27,300,000	18,348,000	155,254,000
July	54,267,000	2,089,000	30,768,000	24,138,000	156,704,000
August	54,441,000	968,000	26,906,000	20,142,000	165,065,000
September	49,228,000	252,000	29,303,000	25,463,000	159,779,000
October	56,011,000	1,384,000	28,365,000	20,884,000	167,925,000
November	54,678,000	674,000	25,164,000	21,059,000	177,054,000
December	55,950,000	1,189,000	28,410,000	20,452,000	185,331,000
1926 Total	645,790,000	10,005,000	334,519,000	252,336,000	.....
January, 1927	54,114,000	460,000	29,228,000	17,842,000	192,835,000
February	47,363,000	2,048,000	23,623,000	20,171,000	198,452,000
March	53,644,000	910,000	28,205,000	23,461,000	201,340,000
April	48,917,000	1,505,000	25,421,000	15,322,000	211,019,000
May	46,267,000	729,000	25,228,000	25,458,000	207,329,000
June	44,938,000	400,000	24,200,000	29,659,000	198,808,000
July	47,979,000	2,789,000	25,970,000	32,105,000	191,501,000
August	41,576,000	2,656,000	34,229,000	20,859,000	180,645,000
GAS and FUEL OILS (Bbls.)					
January, 1926	28,981,000	863,000	3,612,000	.....	*23,266,000
February	27,094,000	1,585,000	3,190,000	.....	*21,445,000
March	29,824,000	947,000	2,345,000	.....	*20,037,000
April	29,029,000	1,148,000	3,475,000	.....	*19,788,000
May	30,380,000	1,368,000	2,735,000	.....	*20,858,000
June	29,130,000	1,856,000	3,370,000	.....	*22,554,000
July	31,461,000	1,485,000	2,427,000	.....	*25,696,000
August	31,154,000	1,629,000	3,582,000	.....	*26,500,000
September	30,698,000	817,000	2,750,000	.....	*27,151,000
October	32,444,000	857,000	2,015,000	.....	*26,376,000
November	31,624,000	1,111,000	5,020,000	.....	*26,859,000
December	33,376,000	764,000	3,830,000	.....	*24,898,000
1926 Total	365,195,000	14,430,000	38,351,000	.....	.....
January, 1927	32,936,000	660,000	3,732,000	.....	*23,195,000
February	30,185,000	1,053,000	3,812,000	.....	*22,099,000
March	32,377,000	525,000	3,657,000	.....	*22,561,000
April	31,856,000	805,000	3,325,000	.....	*23,732,000
May	33,499,000	826,000	4,544,000	.....	*26,059,000
June	31,691,000	851,000	4,278,000	.....	*26,590,000
July	33,693,000	849,000	4,047,000	.....	*28,890,000
August	34,098,000	391,000	4,639,000	.....	*30,346,000

*These stocks for east of California only.

A Free Insurance On Every Pump

EVERY pump you own or operate, to which Triplexd Registered Insured Gasoline Hose* is attached, is NOW INSURED FOR 1000 DAYS from the date that hose was shipped, AGAINST LOSSES FROM ACCIDENTAL BREAKAGE OR MISHANDLING OF HOSE OR EVEN ORDINARY WEAR AND TEAR.

This insurance costs you nothing, and it saves you the greater part of your hose costs.

Experienced pump operators say that the greater part of their hose renewal cost is caused by accidental breakage and mishandling of the hose.

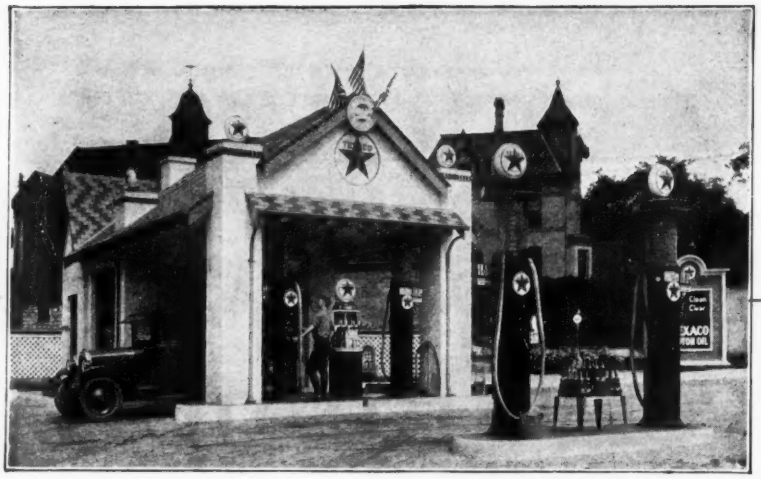
Examine your pumps, and see which of them does and which of them does not save you this expense. Many of them doubtless came to you already equipped with Triplexd Registered Insured Gasoline Hose. And in the operation of those pumps you are already insured against these extra costs, which on your pumps not so equipped you have to pay—continually.

Full information on request, without cost or obligation.

METAL HOSE & TUBING CO.
INCORPORATED
236 Tillary Street
BROOKLYN, N.Y.

Triplexd Registered Insured Gasoline Hose is any length of Triplexd Filling Station Pump Hose ¾", 1", or 1¼" inside diameter, and not more than 15 feet long, shipped from our Brooklyn Factory on or after June 1, 1927

TRIPLEXD
Registered
GASOLINE PUMP HOSE



Notice their Major General Appearance.

Major General!

THE COMMANDING VISIBLE

Used by more than a thousand Jobbers. FLOW-LOCK prevents inaccurate measure.

ASTRAL glass bowls make yellowish cracked gasoline look crystal water-white.

SIMPLIFIED rugged design, every user more than pleased.

Same Price as Ordinary Visible Pumps.

Write today for Catalog of Pumps, Compressors, Lube Outfits, etc.

MILWAUKEE TANK WORKS

Milwaukee, Wisconsin

New York
Woolworth Bldg.

Established 1911

London
Abbey House

TOP DOWN SERVE SELLS THE EXTRA GALLONS

Oil Price Handbook

RECENT crude and tankwagon price changes have caused many an oil man to study prices prevailing a year ago at this time.

What was Mid-Continent crude a year ago today? Or, what was 58-60 U.S. Motor gasoline in Oklahoma? Or, the tankwagon price of gasoline a year ago? These are some of the questions you are asking yourself right now.

You can get the answers most conveniently, rapidly and accurately in the OIL PRICE HANDBOOK for 1926. It contains the refinery, tankwagon, crude prices and export markets for the entire year 1926 as published in the weekly issues of National Petroleum News. 146 pages, cloth bound, marginal index—price $5. Send for your copy *today*.

NATIONAL PETROLEUM NEWS 1213 W. 3rd St. Cleveland, Ohio

of light crudes increased 9,693,000 barrels. As was to be expected the largest increase in tank farm and pipe line stocks east of California was in the Oklahoma-Kansas-inland Texas region.

Receipts of crude from Mexico and Venezuela rose sharply in August, daily averages being: from Mexico—August 108,900, July 91,100; Venezuela—August 71,400, July 42,200.

Output of gasoline, which averaged 903,549 barrels daily, was 0.38 per cent less in August than in July. Production was curtailed in the Indiana-Illinois, Rocky Mountain and California districts. The gain in Texas output was entirely in the Gulf Coastal region. There was a small curtailment of output in the Louisiana Gulf Coastal region.

August shipments were less than July shipments from the East Coast, Louisiana-Arkansas and California districts. Shipments for the whole country were 2.46 per cent more than July shipments. Stocks were lowered in all districts. Except in the Appalachian, Texas and California districts stocks of gasoline were less Aug. 31, 1927, than Aug. 31, 1926.

Of the gasoline produced 61 per cent was straight run, 30 per cent cracked, and 9 per cent natural gasoline, the same percentages as in July.

Output of natural gasoline increased 3,000 barrels daily average but stocks were lowered in all but the Louisiana-Arkansas and California districts, with particularly heavy drafts in the Mid-Continent. There was a small increase in stocks of blended motor fuels.

Kerosene output was increased in August as compared with July in only Texas and California. Total output was 1.43 per cent less in August than in July. Shipments of kerosene from refineries was 26.71 per cent more in August than in July, Texas leading in volume of increase with a gain of almost 8,000 barrels in the daily average. Stocks were lowered in every refining district, but in several districts were larger Aug. 31, 1927, than Aug. 31, 1926.

Domestic demand for kerosene totaled 3,389,000 barrels, a gain of 28.5 per cent over domestic demand in July. Exports totaled 1,700,000 barrels, a gain of 23.5 per cent.

Lubricating oil output was increased 2.99 per cent in August over July output. Shipments were 1.68 per cent less than July shipments but stocks increased only 5,000 barrels. Stocks were reduced in the Indiana-Illinois, Oklahoma-Kansas, Louisiana-Arkansas, Rocky Mountain and California districts. Export demand fell from 993,000 barrels in July to 754,000 barrels in August but domestic demand rose from 1,811,000 to 2,004,000 barrels.

Production of paraffin wax was 41,576,000 pounds, a decline of 15.4 per cent. Imports were 133,000

pounds less than July imports and totaled 2,656,000 pounds. Exports totaled 34,229,000 pounds, a gain of 31.8 per cent. Domestic demand totaled 20,859,000 pounds, a decrease of 35 per cent. The draft on wax stocks amounted to 10,856,000 pounds.

Production of gas and fuel oils, including output of California plants, was 1.2 per cent more than output in July. Shipments from plants east of California was 3.98 per cent more than in July. Stocks at plants east of California rose 1,456,000 barrels to 30,346,000 barrels. Stocks Aug. 31, 1927, were 3,846,000 barrels more than stocks Aug. 31, 1926. Appalachian, Louisiana-Arkansas and Rocky Mountain refineries lowered their fuel and gas oil stocks in August.

The 332 refineries covered in the report, according to G. R. Hopkins, economist for the bureau, operated at 79 per cent of their rated capacity of 2,913,000 barrels of crude a day. Charges of these plants averaged 2.297,000 barrels of crude a day, 114,500 barrels of unfinished oils and 74,900 barrels of natural gasoline.

Shipments of crude through the Panama canal to eastern American ports totaled 1,313,000 barrels in August, compared with 1,124,000 barrels in July. In the first eight months of this year shipments of California crude east totaled 7,279,000 barrels, compared with 8,905,000 barrels in the first eight months of 1926.

Shipments of California gasoline to the east coast totaled 1,268,000 barrels in August, compared with 1,133,-000 barrels in July. In the eight months ended Aug. 31 gasoline shipments from Pacific ports to Gulf and Atlantic ports totaled 7,771,000 barrels, compared with 5.572,000 barrels in the corresponding time of 1926. Other shipments east in August were 232,000 barrels of gas oil, 575,000 barrels of fuel oil and 69,000 barrels of lubricating oils.

Ships 225 Cars of Welded Gas Pipe

MILWAUKEE, Wis., Oct. 8.—What is claimed to be the largest single shipment of pipe ever made and the first shipment of electrically welded gas line pipe, was made Sept. 15 by the A. O. Smith Corp. here for the Dixie Gulf Gas Co. in Texas.

The shipment will comprise 225 cars. The gas line is being built by the Hope Engineering & Supply Co. from Shreveport to Houston and Port Arthur, Tex.

This shipment marks the conversion of Smithsteel gas line pipe, announced May 15 of this year, into actual use in natural gas lines.

The pipe is joined on the longitudinal seam by the Smith method of electric welding and the purchaser can specify the metal thickness of the pipe.

KANOTEX

WHY IS IT?

When there are two filling stations on opposite corners, practically alike in outside appearance—yet one seems to be getting the lion's share of the business—what's the answer?

Yes, of course, Service has a lot to do with it—and also the Products that are sold.

There's also a good reason why so many motorists prefer

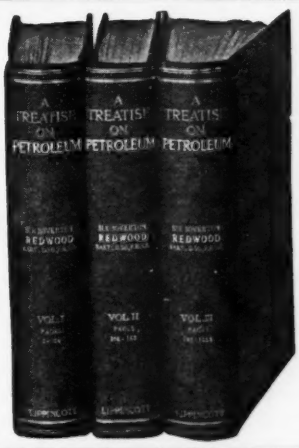
KANOTEX
Petroleum Products

and will pass by several other stations to fill up where the Kanotex sign is displayed.

You too can "cash in" on that public preference—based on actual superior motor performance of Kanotex Gasoline.

How—did you say? Just send us your order for a trial car—then your customers will do the rest.

THE KANOTEX REFINING COMPANY
Phone L. D. No. 4
Arkansas City, Kansas



Information on all branches of the petroleum industry is to be found in the 4th edition of A TREATISE ON PETROLEUM by Sir Boverton Redwood.

To obtain this valuable set make your check for $30 payable to

NATIONAL PETROLEUM NEWS
1213 W. 3rd St. Cleveland, Ohio

CLEARVISION

Dominant in Service

There is Only One CLEAR VISION PUMP

Made by the

CLEAR VISION PUMP COMPANY
of Wichita, Kansas

Pacific Coast Factory
1165 W. Ocean Ave., Long Beach, Calif.

Manufacturing and stocking a complete line of Clear Vision equipment—easily accessible to the West Coast trade.

SEND FOR CATALOG

Our Industry — A Page of Facts and Personalities

National Petroleum News

By Paul Wagner

DAN J. MORAN

DAN J. Moran's penchant for airplane travel, both because of its advantages and because he enjoys it, has been previously recorded in these columns. The present mention of the activities of the production vice president of the Texas Co. is proper, however, because it shows him "in the act." The picture was taken in north Texas, on one lap of a 5,000-mile inspection trip, when Mr. Moran visited all domestic fields in which his company operates. He was accompanied by Pilot Pangburn of the Gates Air Service, Inc., New York City.

* * *

ED. A. LANDRETH, head of the Independent producing company that bears his name, has moved headquarters from Breckenridge, Stephens county, Texas, to Fort Worth. New offices are in the recently completed Petroleum building. Besides Mr. Landreth, the move affected W. M. Smith, manager of the Landreth Production Corp., L. A. Pocock and A. F. Dabney.

* * *

WILLIAM B. SUTTON, land department manager of the Vacuum Oil Co., Houston, has returned to headquarters after a vacation trip spent in touring southwest Texas.

* * *

FRANK W. DeWOLF, until recently in charge of activities of the Humphreys Corp., at Houston, is now manager of the Louisiana Land & Exploration Co., in which Ed. F. Simms of New York and Houston owns control. Mr. DeWolf maintains headquarters at Houston, but spends much of his time in Gulf Coastal Louisiana, where most of the company's prospective acreage is located. Mr. DeWolf is widely known for his association work and from 1911-1923 he was director of the Illinois Geological Survey.

* * *

THE call of the great outdoors is heard by the captains of industry in the education of their sons. Among the younger generation recently entering school under outdoor conditions, inland from Lamy, New Mexico, were the sons of Walter C. Teagle, president of Standard Oil Co. of New Jersey; William S. Farish, president, Humble Oil & Refining Co.; R. L. Blaffer, treasurer, Humble Oil & Refining Co.; and Edgar J. Marston, president Texas Pacific Coal & Oil Co.

* * *

A. P. ERWIN has been appointed superintendent of the Louisiana Oil Refining Corp.'s new $75,000 absorption plant in sec. 28-21-10, Cotton Valley, La., district. The plant has a capacity of 10,000,000 cubic feet of gas daily.

James A. Clearman is back in the Tulsa engineering office of Pure Oil Co., after about two years service in South America.

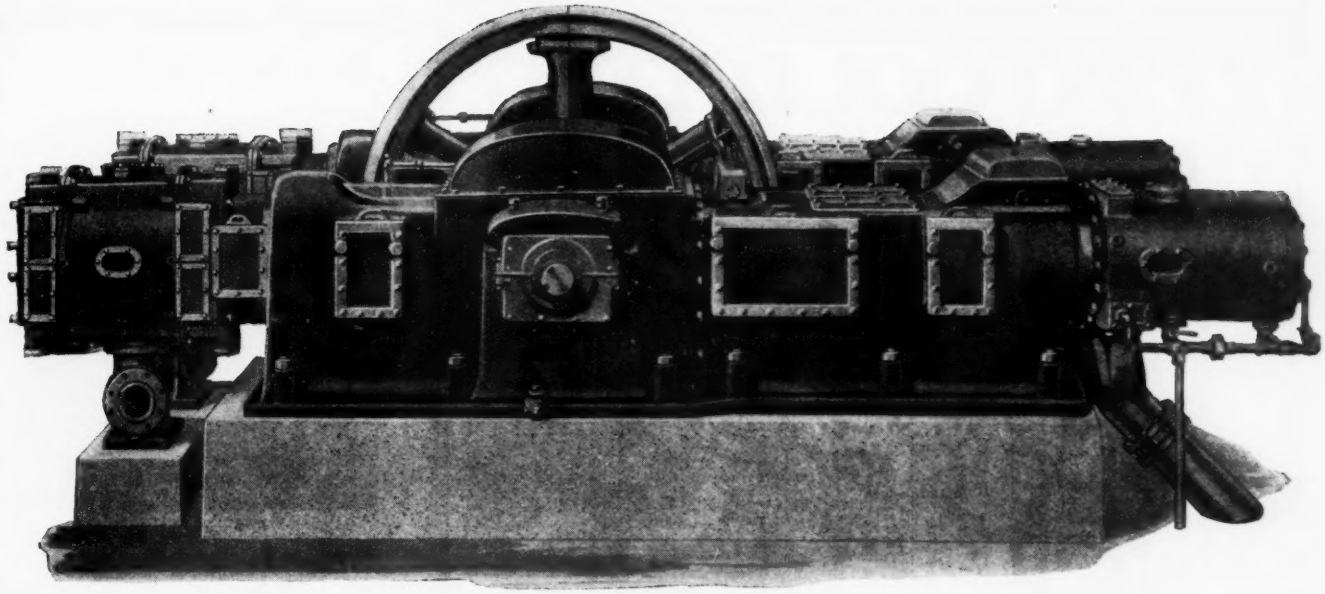
Lacey Walker of the American Petroleum Institute staff at New York City has returned to headquarters after a general southwestern trip on which he took occasion to visit the Yates field, in Pecos county, and other west Texas development areas.

* * *

WHEN the time comes that workers will leave safety guards in place, refuse to use sprung wrenches, chisels with burred heads and other unsafe or defective tools, then, thinks J. L. Diggs of the Norfolk terminal of The Texas Co., industry will be getting closer towards its goal of NO ACCIDENTS. "If we would all be sure before starting a job that our tools and equipment are safe," he says, "there is no doubt that we could materially aid in cutting down accidents."

* * *

DRILLING operations of the Louisiana Oil Refining Corp., in the Ada, Okla., district, are in charge of H. G. Odom, formerly in charge of similar work at Urania, La. Wallace Young, formerly in charge of the company's producing activities at Cement, Okla., has been transferred to Ada to supervise this phase of field work.



Their Performance is a By-Word

BESSEMER
Gas Economizer

4 cycle gas consumption with 2 cycle simplicity.

The Bessemer Gas Eonomizer cuts 2 cycle fuel consumption to that of a 4 cycle—yet retains all the sturdy simplicity of the 2 cycle power plant.

This development, the experimental work on which has been carried on by Bessemer engineers for the past four years and is now perfected and available to the operator, is a simple mechanical device which injects the fuel gas into the combustion chamber under pressure.

It is a simple, mechanical attachment that gives the 2 cycle power plant the gas economy of a 4 cycle.

WHEREVER they are, whatever work they may be doing, Bessemer Type Tens are known—and noted—for their outstanding performability. Cold facts alone have established Bessemers as the standard of compressor service.

High compressor and mechanical efficiency, staunchness of construction, easy accessibility, outstanding simplicity, low operating and maintenance cost and their utter reliability are all factors that have made Bessemer Type Ten performance a by-word wherever the oil industry uses compressors.

Bessemer serviceability is being unceasingly demonstrated in thousands of installations—in natural gasoline plants, on air-gas lift work and in booster stations. They offer the greatest dollar value, the greatest security for any compressor investment, and incorporate the most progressive engineering features.

See them in action—look over their performance records—then judge for yourself

THE BESSEMER GAS ENGINE COMPANY
70 York Street :: Grove City, Pa.

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

ZERO COLD TEST GEAR LUBRICANT

A product of

TRADE MARK
Reg. U.S. Pat. Off.
FISKE'S

A highly developed—reasonably priced transmission and differential lubricant — operates easily with temperature BELOW ZERO—a dark plastic lubricant designed to meet general conditions of automotive transmissions—will not harden in cold weather—thoroughly coats gears and WILL NOT CHANNEL—this is the ideal all season lubricant—keeps its consistency in all temperatures.

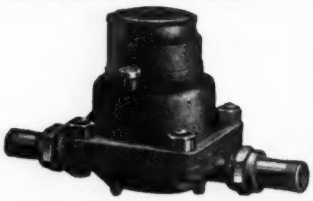
Packed in 400, 200 and 100 lb. drums, also all size cans—200 and 400 lb. drums are equipped with special 2" opening to handle pump.

We manufacture a full line of Lubricating Greases and Specialties.

Wire us for samples and prices

FISKE BROTHERS REFINING CO.
24 State Street, New York, N. Y.
NEWARK, N. J. — *WORKS* — TOLEDO, OHIO

RELIABILITY COMES FIRST



Year after year, users of Niagara Oil or Gasoline Meters depend on them for reliable measurement of petroleum products in any quantity. Their accuracy is constant---the meters are simple and trouble proof---installation is easy. Write us for catalog.

NIAGARA OIL METERS
Built Since 1892 By
BUFFALO METER COMPANY
2889 Main Street :-: :-: **Buffalo, N. Y.**

Davis Welding Organizes Canadian Davis, Ltd.

A. M. BARRY

CINCINNATI, O., Oct. 8.—A. M. Barry, of Montreal, heads the new Canadian Davis, Ltd., with Augustine Davis, Jr., president of the Davis Welding & Mfg. Co., Cincinnati, as vice president. The new company will manufacture truck tank bodies with the same safety features and accessories as those made by the Davis Welding. Better service and lower costs for Canadian and English markets was the object of organizing the Canadian company.

Wide experience in welding problems has fitted Mr. Barry for the position he now holds. One of his early jobs was with the American Locomotive Works at Schenectady. He studied welded truck and tank designs and designed an all welded truck tank body while he was superintendent of the St. Lawrence Co., Ltd., at Montreal, previous to the war.

After 1919 he reorganized the St. Lawrence Co. and operated it as the St. Lawrence Welding & Engineering Works, Ltd. This company is today making welded truck tank bodies and underground and bulk storage tanks. Its plant at Montreal will manufacture Davis tanks.

Leases Katy's Galveston Terminal

CHICAGO—The North American Car Corp. recently leased from the Missouri, Kansas & Texas Railway, the oil terminal of that railroad at Galveston, Tex. Through the North American's subsidiary, the Gulf States Terminal & Transport Co., it is operating the plant along with its export terminal at New Orleans, which was built last year.

Over 5,000 carloads of oil have been handled by the North American company so far in 1927, the company states. The company also operates a fleet of tank cars and has oil storage at Tulsa and Chicago.

The Holmes-Manley *Cracking* Process

Flexibility of Operation.

High Yield of Quality Gasoline direct from the Unit.

Fractionation and Condensation under Full Operating Pressure.

High Yield of Liquid Products with a minimum yield of fixed gas and carbon.

Low yield of Residue Fuel Oil of good Quality.

Relatively low Operating Temperatures.

Ease of Control.

Long Runs and High percentage of Operating Time.

Low Labor and Fuel Costs.

Address Inquiries to

THE TEXAS COMPANY

W. S. S. RODGERS

17 Battery Place, New York, N. Y.

Branch Office

816 Palace Building, Tulsa, Okla.

Glances at Oil Technology of the World

Volatility and Carbonization of Cylinder Oils

MINERAL oils are best for cylinder lubrication. One important test in examining a mineral oil as to its suitability for cylinder lubrication is based on the fact that when the oil is exposed to air for a prolonged period at a temperature of 212 degrees Fahr., it gradually loses weight due to the oxidizing effect of the air. The loss in weight, evaporation or volatility is increased as the temperature rises and the number of times the air in contact with the oil is changed during the period, until at high temperatures the oil is completely evaporated or volatilized and decomposed with the production of a carbon deposit. It is held that the production of carbon deposits together with their nature and weight, and the volatility and evaporation of the oil at temperatures met with in large oil engines, are of considerable importance and have to be considered in preference to the common physical tests in selecting an oil for cylinder lubrication.

Hence a number of tests were made wherein a weighed quantity of oil was heated in a steady current of air for a definite time. Half gram samples were used in a 0.5 square inch area weighed porcelain boat for 30 minutes at 350 degrees Fahr. and the loss in weight determined. The tests were carried out as well at 400, 450, 500 and 550 degrees Fahr. The results obtained in the tests are plotted in a series of curve diagrams found in the original article.

The conclusions indicated that there is a very general relationship between the physical tests of an oil and its volatilization and carbonizing properties. Also that the amount of volatilization that takes place in a given amount of oil varies with the temperature, time and area of exposure. For a given amount of oil and a given temperature the loss is proportional to the area and to the time.

Lighter bodied oils volatilize at lower temperatures but do not carbonize until the bulk of oil has evaporated and therefore remain longer a lubricant, and when they do carbonize the deposit obtained is small. The heavier bodied the oil is, although the temperature of volatilization is higher, the smaller the bulk of oil to volatilize before carbonization takes place and the heavier the carbon deposits. (*Journal of the Society of Chemical Deposits*, 1927, pages 324-327.)

Physical Aspects of Cracking

WHILE the cracking process has attained a position of prime importance in the oil industry, nevertheless, investigations of a systematic character on the physical conditions controlling the process are lacking. Hence a series of experiments was instituted for the purpose of defining in more accurate terms the relationship between the pressure and temperature and the results obtained by cracking various petroleum products to make gasoline.

The experiments were carried out in autoclave which was provided with suitable means for measuring the temperature and pressure and also for controlling the cracking operations and recovering the cracked products. The experimenters are careful to take into consideration the time spent in heating the oil up to the desired cracking temperature and thereby obtain results of greater accuracy.

The first series of experiments were carried out with a paraffin oil of 0.883 specific gravity at 15 degrees C., Engler viscosity 1.96 at 50 degrees C., acid resin number 5 per cent, congelation point plus 31 degrees C., paraffin content 10.5 per cent, initial boiling point 180 degrees C., and final boiling point 310 degrees C.

The results of cracking indicated that the higher boiling products, that is kerosene, and the lower boiling products, that is gasoline, were formed in almost equal proportions. Under constant temperature and pressure conditions the total yield of gasoline and kerosene increased with the duration of the process up to a certain maximum. The total yield of gasoline in the process is 38 to 39 per cent and that of gasoline and kerosene 65 per cent, these yields being capable of being increased by repeating the cracking several times.

The influence of pressure is not of maximum significance but it does reduce the yields of cracked gasoline and kerosene. It is stated that the chief role of pressure in the cracking retort is to maintain the oil in the liquid state, a principal condition in modern cracking practice.

Time and temperature are closely related, for when the pressure was maintained constant and the yield of kerosene and gasoline were fixed at 65 per cent, the time period required to produce this yield at a temperature of 375 degrees C. was 45 hours, at 400 degrees C. nine hours, at 425 degrees C. one and one-half hours, at 450 degrees C. 12 minutes, at 475 degrees C. two minutes and at 500 degrees C. 20 seconds.

The effect of condensation reaction is also discussed. It is found that the specific gravity of the cracked residue increases with the progressive duration of the cracking process. Prolonged duration of the process causes the formation of asphaltenes and coke.

The rapidity of cracking depends not only on the temperature and the duration of the process, but also on the properties of the petroleum products. Various petroleum products were studied, such as bearing oils, machine oils, cylinder oil, solar oils, paraffin and paraffin oils. Investigations of the composition of the produced gasoline and kerosene in comparison with that of the original oil led to the conclusion that the condensation products are formed at the expense of the aromatic hydrocarbons contained in the original oil.

The chemical composition of the various gasolines obtained was determined. It was found that pressure has a great influence in reducing the amount of olefines present in the cracked gasoline. Cracked gasoline was also found to contain no naphthenes under these conditions, refuting the contention that the closed ring of the olefines is broken down to form naphthenes during the cracking process.

There are three ways in which the cracked gasoline differs from ordinary gasoline, namely, first in that the former contains olefines while the latter does not, second in that the former contains a higher proportion of aromatic hydrocarbons and third in that the former contains a lower proportion of naphthenes. (Abstracted from the original article appearing *Petroleum Zeitschfirt*, 1927, pages 521 to 524.)

FOREIGN PATENTS

BRITISH PATENTS
REFINING
Issued Aug. 4, 1927

Cracking Mineral Oils by first treatment with liquefied sulfurous acid and splitting in presence of aluminum chloride. Allgemeine Gesellschaft fuer Chemische Industrie, Berlin, Germany. Filed March 11, 1927. No. 272,433.

Avoiding Deposition of Carbon on Walls of Apparatus in cracking mineral oils by heating oil in retorts containing ni-chrome balls. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. Filed May 26, 1927. 272,483.

Destructive Hydrogenation of Coal, with the air of catalysts in separate chambers. J. Trautmann, Berlin, Germany. Filed June 9, 1927. 272,526.

Cracking Oils by passing vapors and hydrogenating gas through porous mass. I. F. Farbenindustrie A. G., Frankfurt-am-Main, Germany. Filed June 10, 1927. 272,539.

Destructive Hydrogenation in which gases are scrubbed with benzine. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. Filed June 10, 1927. 272,538.

Issued Aug. 10, 1927

Cracking Oils and tars in presence of catalyst at high temperatures and pressure by circulating large excess of hydrogenating gases through reaction vessel. I. G. Farbenindustrie A. G., Frankfort-am-Main, Germany. Filed June 13, 1927. 272,556.

Distilling Shale in Vertical Retort provided with sloping plates down which the shale slides. G. Menell, London, England. Filed Nov. 20, 1926. 272,766.

Hydrogenizing Coal, Tars and Carbonaceous Materials in presence of added combined nitrogen, various catalysts such as molybdenum and compounds. I. G. Farbenindustrie A. G., Frankfort-am-Main, Germany. Filed Feb. 11, 1926 (6) and April 14, 1926. 272,829-835.

Issued Aug. 17, 1927

Stills for Cracking Oils provided with rotary appliances for internal cleaning to remove carbon from walls. The Texas Co., New York, N. Y. Filed Nov. 29, 1926. 273,159.

Distilling Hydrocarbons to remove water vapor in stream of calcium chloride. C. Cooper, D. M. Henshaw and W. C. Holmes & Co. Ltd., Huddersfield, England. Filed Dec. 16, 1925. 273,224.

Cracking Oils by passing them in liquid phase through heating zone and then into enlarged insulated reaction chamber. R. Cross, Kansas City, Mo. Filed May 12, 1927. 273,256.

Issued Aug. 24, 1927

Hydrogenating Mineral Oils at high temperature and pressure and in presence of catalysts. I. G. Farbenindustrie A. G., Frankfort-on-Main, Germany. Filed June 27, 1927. 273,337.

Purifying Mineral Oils by shaking them with phenol containing a small quantity of water J. P. Fraser, Syriam, Burma, assignor, Burmah Oil Co., Glasgow, Scotland. Filed Jan. 25, 1926. 273,351.

Distilling Carbonaceous Materials such as shale in ground form on conveyors passing in countercurrent to heating gases. Salermo Ltd., London, England, and E. M. Salerni, Paris, France. Filed Sept. 15, 1926. 273,528.

Destructive Hydrogenation of Oils with the aid of catalysts including members of the third and fourth group elements. I. G. Farbenindustrie A. G., Frankfort-am-Main, Germany. Filed June 27, 1927. 273,712.

BRITISH PATENTS
MISCELLANEOUS
Issued Aug. 4, 1927

Viscosimeters for testing oils of the rotatable drum type. F. S. Stickney, Pittsburgh, Pa., assignor, Metropolitan-Vickers Electrical Co., Westminster, England. Filed June 7, 1927. 272,251.

Oil Dispensing Pumps adapted to be mounted on oil container. Marvel Equipment Co., Cleveland, O. Filed Oct. 2, 1926. 272,369.

Issued Aug. 10, 1927

Filling Fuel Tanks to prevent entry of rain or other foreign material. T. J. Gilleran, Dublin, Ireland. Filed Oct. 8, 1926. 272,736.

Issued Aug. 17, 1927

Fire Extinguishing by Foam consisting in mixing liquid containing foam generating substance, etc. with air by means of open water jet air pump. C. Wagener and Excelsior Feuerloschgerate A. G., Berlin. Filed March 22, 1926. 272,993.

Detergents by solidifying benzine or gasoline by means of soap. J. Tengler Thurgau, Switzerland. Filed June 16, 1926. 273,083.

Separating Mixtures of Gases by means of silica gel adsorbent traveling in countercurrent to stream of gaseous mixtures and reactivating adsorbent so that it can be used continuously. F. H. Wagner, Baltimore, Md., assignor, Silica Gel Corp., Baltimore, Md. Filed May 25, 1927. 273,261.

Issued Aug. 24, 1927

Spigot and Socket Joints Held by Cement, Caulking and the like, the abutting ends of the pipes being rounded off to form triangular spaces. H. P. Amphlett, and Hume Pipe & Concrete Construction Co., London. Filed May 1, 1926. 273,432.

Oil Containers provided with a covering consisting of a mat of straw rendered non-inflammable and adapted to protect the bottom and two sides. A. E. Punt, Bombay, India. Filed Jan. 4, 1927. 273,591.

Activating Carbon by starting with carbon dust, combined with wood tar binder, pressed and coked. E. Kuechler, Frankfort-am-Main, Germany, assignor, Verein fuer Chemische Industrie A. G., Frankfort-am-Main, Germany. Filed June 15, 1927. 273,683.

Welded Pipe Joint for wrought iron or steel pipes, the weld being formed by corrugating the pipe and then compressing the corrugations to form a lip divided to provide a welding cavity. Aiton Co., and J. A. Aiton, Derby, England. Filed Nov. 4, 1926. 273,557.

BRITISH PATENTS
PRODUCTION
Issued Aug. 4, 1927

Oil Well Pump of single-acting bucket type. R. H. Folsom and J. W. Sheeley, Los Angeles, Calif. Filed Jan. 3, 1927. 272,401.
Issued Aug. 17, 1927—8 PT LF

Raising Oil From Wells by means of swab, provided with suitable valves. L. G. Burt, Tulsa, Okla. Filed Dec. 13, 1926. 272,170.

GERMAN PATENTS
REFINING
Issued Aug. 4, 1927

Refining Mineral Oils and other hydrocarbons with the aid of sulfurous acid in which the solution containing the substances dissolved in the acid are passed through stills working under higher pressures than the condensers, the still or evaporator under highest pressure being treated from external sources while the condensates heat the other evaporators. Allgemeine Gesellschaft fuer Chemische Industrie m.b.H., Berlin-Schoeneberg, Germany. Filed March 6, 1926. 444,678.

GERMAN PATENTS
MISCELLANEOUS
Issued July 21, 1927

Activated Charcoal from carbonaceous material, heated in retorts, the heat being supplied by exothermic action of gases with or without external heating of the retort. Algemeene Norit Maatschappij, Amsterdam, Holland. Filed Nov. 14, 1922. 444,260.

Oil Container With Float Valve and arrangement for removing water collecting over the valve, the heavier water being drawn off from the bottom. J. H. Wiggins, Bartlesville, Okla. Filed Dec. 6, 1924. 444,178.

Issued Aug. 4, 1927

Washing Medium for Light Oils from ingredients of mineral oils soluble in liquefied sulfurous acid. I. G. Farbenindustrie A. G., Frankfort-am-Main, Germany. Filed June 26, 1925. 444,529.

FRENCH PATENTS
MISCELLANEOUS
Issued July 23, 1927

Distillation of Mineral Combustibles at Low Temperatures. Compagnie des Mines de Bruay. Filed Dec. 18, 1926. 627,415.

Issued Aug. 14, 1927

New Apparatus for Catalytic Reactions Between Liquified Gases and Vapors. Societe Anonyme Le Petrole Synthetique, Paris, France. Filed Jan. 18, 1927. 627,657.

Liquid Combustible Process. Gasone Corporation. Filed Dec. 16, 1926. 627,424.

Highly Activated Carbon. Chemische Werke Carbon G.m.b.H. Filed Jan. 15, 1927. 627,751.

Issued Aug. 14, 1927

Destroying Oil Emulsions or Suspensions, process and apparatus. H. W. Robinson and D. W. Parkes. Filed Jan. 31, 1927. 628,284.

Filtering Device for Decolorizing Liquids by Means of Active Materials. R. M. Berline. Filed April 9, 1926. 628,567.

Gas and Vapors from Liquid Hydrocarbons of Low Value, the vapors being then converted into light hydrocarbons. Societe Internationale des Procedes Prudhomme. Filed April 9, 1926. 628,562.

Treating Plant Quickly and Cheaply Installed

Using equipment already on the lease, you can soon arrange a plant for treating any quantity and any variety of "cut oil" with—

Tret-O-Lite

There is no heavy investment. Sufficient treating capacity for flush production does not penalize the operator at a later period.

WM. S. BARNICKEL & CO.
St. Louis, Mo.

Tret-O-Lite

Professional Card Directory

McCARRON AND ROSENBAUM
Attorneys and Counsellors at Law
Specializing in all Branches of Corporation and Commercial Law—Reorganization.
Trial Practice in all Courts, State and Federal.
Guarantee Title Bldg.—Cleveland, Ohio

S. F. SHAW
CONSULTING ENGINEER
301 Terrell Road San Antonio, Texas
Organization of Air—Gas Lift Departments and Training of Engineers for this work.

L. G. Huntley J. R. Wylie, Jr.
Shirley L. Mason
HUNTLEY & HUNTLEY
PETROLEUM GEOLOGISTS AND ENGINEERS
Frick Building PITTSBURGH, PA.

BERG

LOHOCLA

188 proof Completely Denatured Alcohol for use as an *ANTI-FREEZE* in automobiles. Our distributors and warehouses at strategic points throughout the country assure prompt delivery "when you want it".

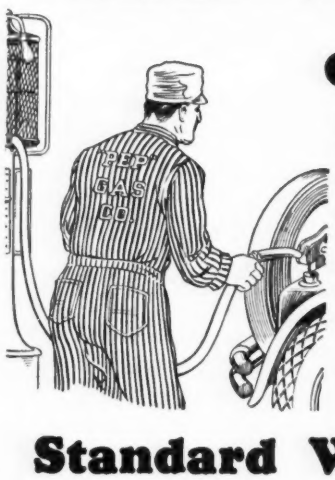
DAVID BERG INDUSTRIAL ALCOHOL CO.
Philadelphia, Pa.

New York Warehouse — 527 Hudson Street

DISTRIBUTORS

M. J. Daly & Co. 605 Gerke Bldg. Cincinnati, Ohio	J. Rosenfield P.O. Box 424 Lancaster, Pa.	A. H. Selling 527 Hudson St, New York City	Chas. A. Webb & Co. 514 S. Eutaw St. Baltimore, Md.
J. C. Drouillard Co. Rockefeller Bldg. Cleveland, Ohio	Rolls Chemical Co. 483 Ellicott Sq. Bldg. Buffalo, N. Y.	N.S.Wilson & Sons, Inc., 74 W. 2 St. Boston, Mass.	E.E. Zimmerman Co. Bessemer Bldg. Pittsburgh, Pa.
August Hoffmann Majestic Bldg. Indianapolis, Ind.	H. H. Reed 549 W. Washington St Chicago, Ill.	W. P. Williams Co. 216-220 Ellsworth Ave. Grand Rapids, Mich.	Morley Bros. West End of Dodge Ave. Detroit, Mich.

That impression of efficiency



When motorists drive up to your filling station are they served by neat appearing attendants?

Add to your service that one touch that makes it complete. Have your men uniformed — "Well dressed for work."

Standard Work Garments are made of the finest materials — triple stitched and reinforced — made to look right and wear right.

Standard Work Garments

$3.25 each

15% off in dozen lots. Special Prices in larger quantities.

Choice of blue denim, white, hickory stripe, express stripe, fancy blue and gold stripe. Union Made. Name or trade-mark embroidered in fast colors for 25c per garment.

The Standard Garment Co.

Toledo, Ohio

New Stations Building

Birmingham, Ala.—Mrs. L. F. Adams will build filling station.

Gulfport-Biloxi, Miss.—Standard Oil Co. of Kentucky is building service station.

Westerly, R. I.—Standard Oil Co. of New York will erect service station.

Savannah, Ga.—F. J. Howden seeks permit for filling station.

Kansas City, Mo.—National Refining Co. will build filling station.

Litchfield, Minn.—Fred Kopplin will build filling station.

Bayard, Neb.—Frank D. Ellermeier and William D. Kirkmon purchased site for filling station.

Altus, Okla.—S. C. Hickman is erecting filling station.

Eddyville, Ia.—Wapello Oil Co. is completing filling station.

Sandusky, O.—H. A. Thompson seeks permit for filling station.

Utica, O.—Charles Morrow will include filling station in the new house he is building.

Toronto, O.—Three service stations are being built here; one which will be operated as the Brooks Service Station by Mr. Brooks; and two by Freedom Oil Co.

Zanesville, O.—Roy V. Sebaugh is completing filling station.

Saline, Mich.—A. B. Henderson will build service station here, and will handle Staebler Oil Co.'s products.

New Equipment

A. Y. McDonald Mfg. Co., Dubuque, Ia., has placed on the market a patented device which it claims will prevent static electricity in the loading of truck tanks. The apparatus is called the McDonald static grounding device. It consists of two parts, a large threaded collar that screws permanently into the flange opening of the truck tank. The second part consists of an electric contact knob which remains permanently at the loading rack. A ground wire is soldered into the upright terminal of knob.

When the device is properly screwed on, it provides clean ground and removes the danger of static electricity

* * *

A new catalog has just been issued by Rotary Disc Bit Co., 55th and Alameda, Los Angeles, which delves into the origin of the disc bit, describing the various types, giving price lists and other information of value to those using this type of equipment. A copy of catalog will be mailed upon request.

* * *

R. J. Shornhorst, who has been selling oil field equipment, has been appointed to the sales force of the Reading Iron Co., Reading, Pa., which company claims to be the world's largest manufacturer of genuine wrought iron pipe. Mr. Shornhorst will devote his efforts to the Pennsylvania oil fields for the time being, and will have headquarters in the First National Bank Bldg., Pittsburgh.

New Patents

Sept. 13

REFINING

Heat Exchanger with Self-Draining Tube Surface.—Russell C. Jones, Bronxville, N. Y., assignor to The Griscom-Russel Co., New York, N. Y. Filed April 8, 1926. No. 1,641,975.

Art of Obtaining Products from Sludge.—Louis Burgess, Bayonne, N. J., assignor to Standard Development Co., New York, N. Y. Filed Dec. 22, 1922. No. 1,642,060.

Process and Apparatus for the Conversion of Heavy Petroleum Oils into Lighter Oils.—Vernon W. Northrup, Hurlock, Md., assignor to The Petroleum Hydrogenation Co. of America, Inc., Wilmington, Del. Filed Nov. 20, 1924. No. 1,642,624.

PRODUCTION

Oil-Well Pump.—William Frederick McMahon, Riverside, Calif. Filed Nov. 2, 1925. No. 1,642,-121.

Automatic Tubing Catcher for Wells.— Robert A. Wilson, Dallas, Tex., assignor to The Guiberson Corp., Dallas, Tex. Filed June 26, 1926. No. 1,642,136.

Deep-Well Pump.—Jesse D. Langdon, Los Angeles, Calif., assignor to Petroleum Machinery Development Corp., Reno, Nev. Filed Aug. 4, 1926. No. 1,642,211.

Rotary.—Homer C. Thrift, Burkburnett, Tex. Filed Feb. 5, 1923. No. 1,642,220.

Deep-Well Pump.—Jesse D. Langdon, Los Angeles, Calif., assignor to Petroleum Machinery Development Corp., Reno, Nev. Filed Aug. 4, 1926. No. 1,642,250.

Packer.—Harvey R. Standlee, Tulsa, Okla. Filed Sept. 9, 1926. No. 1,642,273.

Pump-Operating Device.—Louis Stendahl and Edward Hanson, Zimmerman, Minn. Filed May 21, 1923. No. 1,642,274.

Deep-Well Rotary Drilling Apparatus.—Clarence E. Reed, Wichita, Kans. Filed June 15, 1925. No. 1,642,463.

Core Bit and Plug for Drilling.—William L. Acker, Scranton, Pa. Filed July 28, 1927. No. 1,642,572.

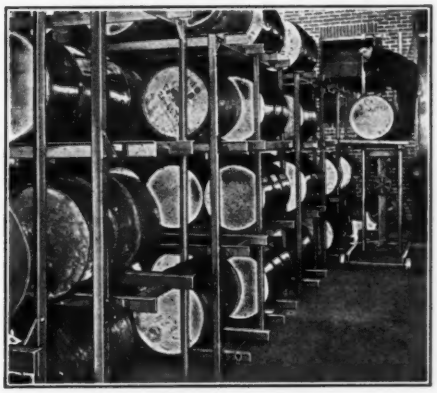
Working Barrel for Oil Wells.—Alfred H. Carnes and Rizal M. Marr, Okemah, Okla., said Marr assignor of one-fourth to said Carnes and one-fourth to Mrs. J. D. Belford, Okemah, Okla. Filed Nov. 16, 1925. No. 1,642,601.

Well-Drilling Apparatus.—Fred A. Philbrick, Santa Cruz, Calif. Filed Nov. 4, 1925. No. 1,642,628.

Automatic Tubing Catcher for Wells.—Robert A. Wilson, Dallas, Tex., assignor to The Guiberson Corp., Dallas, Tex. Filed June 26, 1926. No. 1,642,635.

MISCELLANEOUS

Oil-Drum Hoist and Tilting Frame.—Herbert A. Nichols, Robstown, Tex. Filed Feb. 5, 1926. No. 1,641,985.

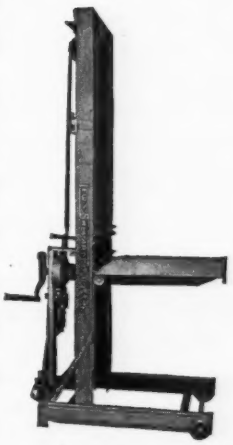


Lewis-Shepard Barrel and Drum Racks are made of channels. You pay for no more steel than necessary. All units arc-welded. Easily assembled. Made to any height and to fit any floor space.

Write us.

Stackers Save Dollars

Hundreds of dollars are saved by scores of concerns in the oil industry every year by using Stackers. They save time, men, floor space. Particularly we recommend for the industry the 500 lb. Stacker shown at the right. Write today for 1927 Catalog. LEWIS-SHEPARD CO., 143 Walnut St., Watertown Station, Boston, Mass.



500 lb. Stacker

A master portable elevator to handle oil drums and barrels more economically. No need to pay more if your loads are 500 lbs. or less. Send for Catalog.

LEWIS-SHEPARD

Help Your Salesmen

to acquire a working technical knowledge of the selection, application and use of lubricants, by ordering for each one a copy of the PRACTICE OF LUBRICATION by T. C. Thomsen.

It discusses the origin, nature and testing of lubricants and every phase of lubrication engineering.

It is $6 a copy. Make your check payable to—

National Petroleum News

1213 West Third Street **Cleveland, Ohio**

Durable Douglas Fir timbers

DOUGLAS FIR structural timbers have long been used and highly regarded on the Pacific Coast, and within recent years have become important in the eyes of oil producers all over the country.

Size

Douglas Fir timbers can be, and are, easily produced in great sizes and long lengths—since there is an abundance of trees of large diameter and towering height.

Durability

A Douglas Fir log has a sap ring usually less than 2 inches wide. Most timbers cut from large logs will be all heartwood; those cut from smaller logs occasionally have sap corners. Since 85% to 90% of the log is heartwood, it is a simple matter to comply with specifications calling for *all* heartwood —which reaches White Oak in durability.

Strength

The tensile and crushing strength of Douglas Fir is high. In structural grade the allowable stress in bending is 1,600 pounds per square inch, with compression stresses in proportion.

Lightness and stiffness

With a weight of 35 to 38 pounds per cubic foot, Douglas Fir timbers are easy to handle and erect—eliminating useless dead weight of structures. The stiffness of Douglas Fir minimizes weaving and deflection.

Spike and screw-holding ability

The unusual ease with which Douglas Fir takes spikes and screws, and its ability to retain them is a valuable asset. Tests, made soon after spikes are driven, indicate that the holding power of all species is about the same, except that the oaks are somewhat superior. But as the spikes become corroded, Douglas Fir appears to have the greater holding power.

Life of untreated Douglas Fir

Structures in which Douglas Fir timbers are used untreated, show that untreated timbers may be expected to last 15 years under average conditions.

Life of treated Douglas Fir

The life of creosoted Douglas Fir is so much longer that creosoting for exposed uses is well worth while. The treating of Douglas Fir is a slower process than with some of the other species, but is nevertheless, just as successful. Our engineers will be glad to consult with you as to the most effective methods of treating Douglas Fir.

Specifications and grading rules

Douglas Fir ties, structural timbers and lumber can be supplied in all grades—ON GRADE. There is a variation in type in Douglas Fir, just as in all wood species, but grade specifications are based on these variations. Engineers can safely use stresses based on specific grades, in which the strength of a timber can be determined within close limits by visual inspection alone.

Douglas Fir and your own uses

When you are contemplating the purchase of timbers, we urge the importance of considering the many advantages of Douglas Fir, its availability, and the fact that it is obtainable promptly at reasonable price. We will be glad to furnish much technical data or have our engineers consult with you at your convenience regarding Douglas Fir and other West Coast woods. Address, West Coast Lumber Bureau, 562 M Stuart Building, Seattle, Washington.

Durable
Douglas Fir
America's Permanent Lumber Supply

Important West Coast woods:—Douglas Fir, Sitka Spruce, West Coast Hemlock, Western Red Cedar

ON THE LAZY BENCH

National Petroleum News

Wrong Shop

"I want a bottle of iodin."

"Sorry, but this is a drug-store. Can't I interest you in an alarm clock, some nice leather goods, a few radio parts, or a toasted cheese sandwich?"—*Loreco Diamond.*

* * *

Gray: "Is your wife the only woman you ever loved, old chap?"

Green (dryly). "Not exactly; but she's the only woman who—er—ever made me prove it!"—*Skelly News.*

* * *

"The foreigner in our block claims he's been naturalized, but I doubt it."

"How's that?"

"Well, he's still living within his means."—*Skelly News.*

* * *

"I never saw but one man," said Uncle Bill Bottlestop, "that I thought had a chance foolin' with bootleg liquor. He was a sword-swallower and his wife was a snake-charmer."

—*Skelly News.*

* * *

Judge: "Having left your wife you are charged with being a deserter. Are these facts true?"

Victim: "No, your honor, not a deserter—just a refugee."—*Flash Points.*

* * *

Those who dabble in the stock market are getting quite a kick out of a story now going the rounds. It concerns a New York clerk who decided that he would get in on some of the easy money he heard was being made by speculators.

After long thought he concluded that the best approach to riches was by looking about, picking out some commodity or article generally used and buying stock in a company manufacturing same. About the time he had this happy thought he noted that lunch hour had arrived, so he went across the street to his favorite Automat restaurant.

With brain functioning brilliantly on his new idea, he became aware for the first time of the swarm of people pushing their five-cent pieces into the slots and drawing out food. Inspiration hit him with gigantic force.

Forgetting his lunch, he rushed down the street to a broker and bought five shares of International Nickel.

* * *

Fair Customer: "I'd like to try on that skirt over there."

Salesman: "I'm sorry, madam, but that is the lamp shade."

—*Loreco Diamond*

Happy Days

"The party of the first part," dictated the lawyer, "agrees with the party of the second part."

"I'm gonna like this job," said the new stenog, "it's all about parties."—*Loreco Diamond.*

* * *

The Two of Us

Maud: "Did you have a nice time last week end?"

Isabel: "And how! Saturday night we went canoeing on the lake and sang all the old love songs under a gorgeously romantic moon. We didn't come ashore until after midnight."

Maud: "That's queer. I was told by some one who saw you that you were canoeing all alone?"

Isabel: "I was."

Maud: "Then where do you get the 'we'?"

Isabel: "From Lindbergh."—*Life.*

* * *

Thoroughly in Earnest

"Did you—utterly without warning—assault this poor wholesale salesman and throw him into the street?" demanded the district attorney.

"Yes," replied the retailer. "Three times."—*Loreco Diamond.*

* * *

Salesman: "What's the name of this town?"

Wide Trousers: "I couldn't say, I just go to college here."

—*Loreco Diamond*

* * *

Young Wife: "Oh, I am miserable; my husband has been out all evening, and I haven't the faintest idea where he is."

Experienced Friend: "My dear, you must not worry. You probably would be twice as miserable if you did know."—*Loreco Diamond.*

* * *

Colored Maid (to mistress): "Miss L., will you please, ma'm, 'vance me 25 cents on my wages? The leader of our church is gwine away, and we want to give him a little momentum."

—*Loreco Diamond*

* * *

Girls, Beware!

The disrepute into which corsets have fallen was well illustrated at a recent college dance.

Speaking of the one girl in the place who wore 'em, one young man said:

"Well, I'm going over and dance with Old Ironsides now."

—*Loreco Diamond*

All-in-One-Folio

Your Name in Gold FREE

$25.00

Folio opens out to full Display

361—This Folio is substantially made from heavy, smooth, 5-oz. black cowhide. No flaps—Solid ends. Opens out for full display. Contains eighteen 4-oz. bottles with metal capped corks. Bottles partitioned separately. Case also contains six 1-oz. squat grease jars. Plenty of room for literature and order blanks.

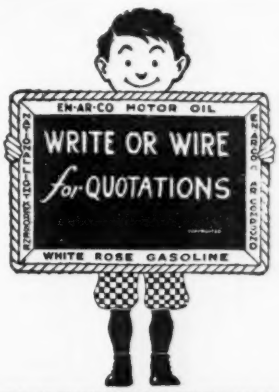
Less 10% for Cash

Other styles in our FREE Catalog

L-U-C-E

Builders of Sales Luggage

614 Delaware, KANSAS CITY, MO.



The NATIONAL REFINING COMPANY

PETROLEUM PRODUCTS

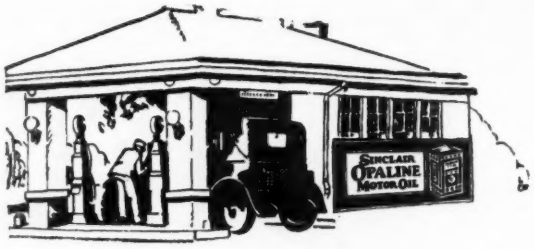
THREE MODERN REFINERIES:

Marietta, Ohio Refinery
operated on Pennsylvania Crude

Findlay, Ohio Refinery
operated on Ohio Crude

Coffeyville, Kansas Refinery
operated on Midcontinent Crude

National Headquarters
NATIONAL BLDG., CLEVELAND, O.



The most inviting SIGN *along the highway!*

Authorized Dealer

SINCLAIR OPALINE MOTOR OIL

REG. U. S. PAT. OFF.

Seals Power at every Degree of Wear

THE Sinclair Opaline Motor Oil Authorized Dealer Sign stops the alert motorist because he knows that where he sees this sign he gets not only good oil but correct lubrication!

The motorist tells the Authorized Opaline Dealer how far he has driven his car—whether it be 150 miles, 2000 miles, 12,000 miles or more. The Dealer then sells him that grade of Opaline Motor Oil which the Sinclair Recommendation Index prescribes to seal the power in his engine, according to the degree of wear as indicated by the speedometer. May we tell you about this successful method of selling *correct lubrication* with the full line of Opaline Motor Oils?

SINCLAIR REFINING COMPANY, INC.

Also Makers of Sinclair Gasoline and H-C Gasoline

45 NASSAU STREET, NEW YORK

Atlanta Boston Chicago Houston Kansas City

Entire contents copyrighted 1927 by Sinclair Refining Company, Inc.

Mid-Continent Refinery Prices Steady But Gasoline Demand Slackens

Staff Special
TULSA, Oct. 8

THE Mid-Continent refinery market price structure today was essentially the same as a week ago.

The pronounced optimism of a week or so ago was lacking in several quarters this week, probably because of inclement weather in much of the consuming territory, together with a revival of talk as to possible crude price reductions in the near future.

The discussion of crude prices has been dormant virtually since the proration plan was installed at Seminole. This week several salesmanagers, however, declared they did not feel so easy about present crude prices as they had felt three or four weeks ago.

One close student of the crude situation said today he would not hazard a guess as to what the crude market would develop in the next 15 to 30 days, but that a cut in prices would not surprise him. His conclusions, he said, were based on the fact that production has not been declining this fall as rapidly as had been expected in many quarters, that refiners are not taking as heavy runs as they were two or six weeks ago, and that in view of the large stocks of crude on hand with the heavy carrying charges, purchasers are not enthusiastic over accumulating more at present prices.

Demand for 58-60 U. S. Motor and heavier gasoline was off somewhat this week, many salesmanagers said. Inclement weather has muddied many roads in northern states, their jobber customers reported, and gallonage to the consumer has fallen off. Prices of 58-60 U. S. Motor closed the week, however, at 6 to 6.50 cents, with the bulk of sales being made at 6.125 to 6.375 cents.

North Texas refiners reported demand for their lower gravity goods was not so good, but little gasoline of these grades was available on the spot market, and prices were slightly better than prices in Oklahoma.

The north Louisiana and Arkansas refiners were in the best position of any of the other areas. Several small plants have closed in that district, and other plants have closed cracking units with the result that production of gasoline is just about on a par with demand. Reports today indicated 58-60 U. S. Motor for shipment into Arkansas was comparatively scarce at 6.50 to 6.625 cents a gallon, with the same prices prevailing in Louisiana, and one or two refiners are having to buy some goods from others in that district. One refiner who operates both in Arkansas and Oklahoma, has had to swing some of his instructions to the Oklahoma plant to get out shipments on time.

High gravity gasolines were in active demand again this week. Goods were scarce in all areas although a few more refiners who had been making considerable U. S. Motor have changed their cut to the higher grades.

THE 64-66, 390 e.p. and the 64-66, 375 e.p. gasolines in Oklahoma have been pegged at 6.875 to 7 cents and 7 to 7.25 cents respectively most of the week, with some minor fluctuations. The production of higher gravities in Kansas has been about on a par with demand in that state, while in Texas export purchases have kept refiners busy the last two weeks, so they have had little goods to offer on the spot market. Arkansas and Louisiana refiners are making little high test goods.

Natural gasoline prices are back to approximately the same price level as a week ago, after a slight sag early this week. Buying was not active around Oct. 1 and prices of all grades eased off about 0.125 cent. New buying developed late in the week, however, and prices responded immediately, due principally to the fact that goods are rather scarce for spot shipment, several manufacturers said.

One large manufacturer said Friday that his regular refiner customers are increasing their orders for all grades, while buying for eastern and southern shipments has been good.

Another large company has been buying on the outside again this month to take care of its large volume of orders. Buyers have been unable to find much Grade C, but several manufacturers said today that with cooler weather their grade C production would increase at the expense of grade B and BB, and in some instances grade AA.

Some new buying by larger jobbers who are doing their own blending to "pep" up their gasolines for the winter trade, also has been reported the past few days.

Kerosene is holding the spot light again as one of the most active commodities in the list. Buyers in Oklahoma have found 41-43 water white pegged at 4.50 cents virtually all week.

Export buying of kerosenes in Texas recently has made it extremely difficult to get goods for domestic shipment, several buyers have reported. Prices as high as 4.75 cents for 41-43 water white have been reported for immediate shipment. One buyer said today he had combed the field and had been unable to find a sufficient spot volume to take care of his regular trade.

Louisiana refiners also are in good shape on kerosenes and 41-43 w.w. is bringing around 4.75 cents in that territory. Most of the kerosene made in Arkansas is 42-44 which is moving at 4.75 to 5 cents a gallon.

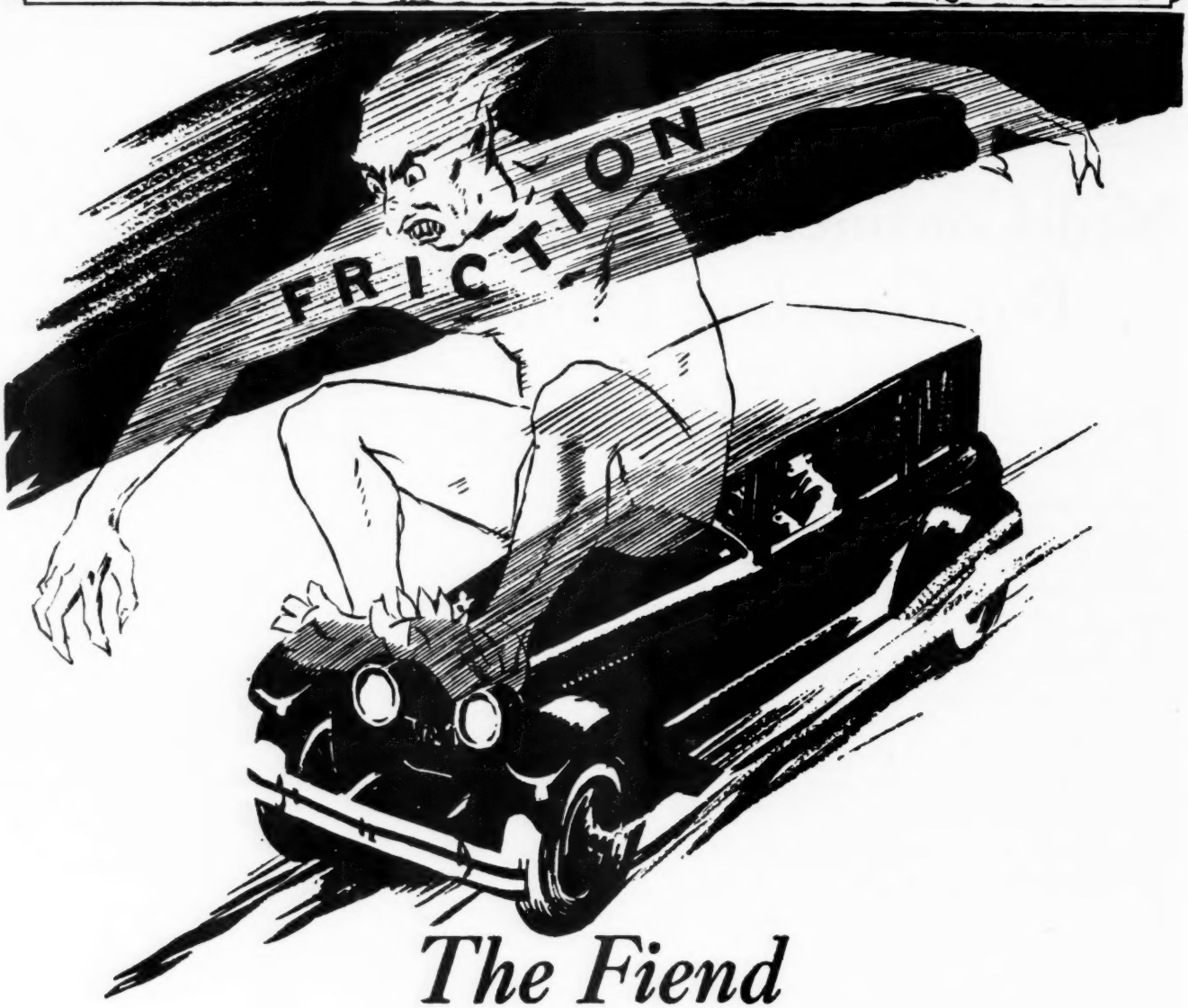
Distillate prices have remained steady for several weeks. Refiners have been shipping steadily on their contracts, but spot business has been rather slow due to the mild weather in much of the territory.

Gas oils also have not changed the last several weeks. Several refiners this week indicated that as soon as colder weather came they probably would make a little low cold test goods if demand was good. Others indicated they already had contracted to sell all the low cold test goods they could make.

WHILE fuel oil buying on the spot market has been rather quiet, refiners have been shipping large quantities on orders previously booked, and several said today they probably would show reductions in their stocks this week. Prices of low gravity fuel oils lost a little ground when demand for them was slower than for other grades.

Oklahoma wax prices were 2.875 to 3.125 cents. Several refiners are sold up for this month.

THERE IS NO SUBSTITUTE FOR QUALITY



The Fiend that rides unseen!

Friction rides with a car everywhere . . . ready all the time to break through POOR OIL to damage bearings and cylinder walls. The guard against this Fiend Friction is *good* oil . . . TAGOLENE. The high specifications that TAGOLENE must meet assure you of its quality. Such quality with its low price means repeat business and increased profits for you. Write or wire for information regarding TAGOLENE to SKELLY OIL COMPANY, Eldorado, Kans.; Tulsa; Omaha; and Minneapolis.

SKELLY

TAGOLENE MOTOR OIL

MADE BY THE REFINERS OF THE NEW ADVANCED SKELLY *REFRACTIONATED* GASOLINE

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

	Prices Oct. 10	Prices Oct. 3	Prices Sept. 26
PENNSYLVANIA			
52-54 Naphtha	8.25 – 8.50	8.25 – 8.50	8.25 – 9.00
54-56 Naphtha	8.25 – 8.50	8.25 – 8.50	8.25 – 9.00
58-60 Gasoline	8.25 – 8.50	8.00 – 8.375	8.25 – 8.75
60-62 Str.-run gasoline	8.75 – 9.25	8.75 – 9.00	9.00 – 9.25
64-66 Str.-run gasoline	9.25 – 9.75	9.25 – 9.75	9.50 – 9.75
68-70 Str-run gas. 350-360 e.p.	9.75 –10.25	9.75 –10.25	9.75 –10.50
OKLAHOMA			
48-50 450 e.p. naphtha	5.75 – 6.00	6.00	6.00
50-52 450 e.p. naphtha	5.75 – 6.00	6.00	6.00
56-58 450 e.p. gasoline	6.00	6.00	6.00
58-60 450 e.p. gasoline	6.00 – 6.125	6.00 – 6.125	6.00
56-58 U. S. Motor, 437 e.p.	**6.00 – 6.125	**6.125	**6.125
58-60 U. S. Motor, 437 e.p.	6.00 – 6.50	6.125– 6.50	6.125– 6.50
60-62 437 e.p. gasoline	**6.25 – 6.75	**6.25 – 6.75	**6.25 – 6.75
60-62 400 e.p. gasoline	**6.50 – 7.00	**6.50 – 7.00	**6.50 – 7.00
64-66 390 e.p. gasoline	**6.875– 7.00	**6.875– 7.00	**6.875– 7.00
64-66 375 e.p. gasoline	**7.00 – 7.25	**7.00 – 7.25	**7.00 – 7.25
68-70 350-360 e.p. gasoline	*7.50	*7.50	*7.25 – 7.50
KANSAS* (F. O. B. refinery Kansas destination)			
58-60 U. S. Motor 437 e.p.	6.50	6.50	6.50
60-62 400 e.p. gasoline	7.00	7.00	7.00
64-66 375 e.p. gasoline	7.375– 7.50	7.25 – 7.50	7.25 – 7.50
NORTH TEXAS			
48-52 450 e.p. naphtha	†6.00	†6.00	†6.00
56-58 450 e.p. gasoline	5.875	5.875	5.75 – 5.875
58-60 450 e.p. gasoline	5.875– 6.125	5.875– 6.125	5.875– 6.00
58-60 U. S. Motor 437 e.p.	6.125– 6.25	6.25	6.125– 6.25
60-62 400 e.p. gasoline	6.50 – 6.625	6.625	6.50 – 6.625
64-66 390 e.p. gasoline	6.75 – 6.875	6.75	6.75
64-66 375 e.p. gasoline	7.00	6.875– 7.00	6.875– 7.00
68-70 350-360 e.p. gasoline	7.25 – 7.375	7.25 – 7.375	*7.25
NORTH LOUISIANA (For Louisiana and differential territory destination)			
58-60 U. S. Motor gasoline	6.625	6.50	6.50
ARKANSAS (For Arkansas intrastate shipment)			
56-58 450 e.p. gasoline	6.25	6.25	6.25
58-60 450 e.p. gasoline	6.25	6.25	6.25
58-60 U. S. Motor 437 e.p.	6.625	6.375– 6.625	6.375– 6.625
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
58-60 U. S. Motor 437 e.p.	**6.375– 6.625	**6.25 – 6.50	**6.25 – 6.50
CALIFORNIA			
*54-58 U.S. Motor 437 e.p.	7.25 – 8.50	7.25 – 8.50	7.25 – 8.50
*58-61 U.S. Motor 437 e.p.	8.50 – 9.50	8.50 – 9.50	8.50 – 9.50
*42-45 Eng. dis. 445-480 e.p.	6.50 – 7.00	6 50 – 7.00	6.50 – 7.00

*2c tax to be added if used in state.

NATURAL GASOLINE

(Note: End point of all grades, not over 375° F. Since Oct. 1, 1927 all naturals must pass corrosion test.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	6.125– 6.25	6.00	†6.125– 6.25
Grade A, 72-79.9, 90% Recovery	6.125– 6.25	6.00	†6.125– 6.25
Grade BB, 84-92, 85% Recovery	5.75	5.50 – 5.625	†5.75
Grade B, 76-83.9, 85% Recovery	5.75	5.50 – 5.625	†5.75
Grade C, 80-90, 78% Recovery	5.50 – 5.625	5.50	†5.625– 5.75
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	6.125– 6.25	6.00 – 6.125	†6.125– 6.25
Grade A, 72-79.9, 90% Recovery	6.125– 6.25	6.00 – 6.125	†6.125– 6.25
Grade BB, 84-92, 85% Recovery	5.75	5.625	†5.75
Grade B, 76-83.9, 85% Recovery	5.75	5.625	†5.75
Grade C, 80-90, 78% Recovery	5.625	5.50 – 5.625	†5.625– 5.75
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†6.375– 6.50	†6.25 – 6.375	†6.25 – 6.375
Grade BB	†6.00 – 6.125	†6.00	†6.00
Grade C	†6.00 – 6.125	†6.00	†6.00
CALIFORNIA			
75-85, 375-390 e.p. blend.	8.00 –10.00	8.00 –10.00	8.00 –10.00

MOTOR FUEL BLENDS

PENNSYLVANIA			
68-70 Blend 437 e.p.	Prices	.....	.....
64-66 Blend 437 e.p.	temporarily	.....	.....
60-62 Blend 437 e.p.	discontinued	.....	.....
OKLAHOMA			
64-66 Blend 437 e.p.	6.00 – 6.125	6.125– 6.25	6.125– 6.25

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.875– 7.125	6.50 – 6.75	6.00 – 6.50
46 w.w. kerosene	7.00 – 7.25	7.00 – 7.125	6.50 – 7.00
47 w.w. kerosene	7.25 – 7.50	7.25	6.875– 7.25
OKLAHOMA			
41-43 w.w. kerosene	4.50	4.50	4.25 – 4.375
42-44 w.w. kerosene	*4.75 – 5.00	*5.00	4.75
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	4.875– 5.25	4.75 – 5.25	4.75 – 5.25
42-44 w.w. kerosene	5.625– 5.75	5.50 – 5.75	5.50 – 5.75
NORTH TEXAS			
40-42 w.w. kerosene	†4.25 – 4.375	†4.25	†4.125– 4.25
41-43 w.w. kerosene	†4.50 – 4.625	4.375– 4.50	4.25 – 4.375
NORTH LOUISIANA (For Louisiana and differential territory destination)			
41-43 w.w. kerosene	4.75	4.50 – 4.625	4.375– 4.625
ARKANSAS (For intrastate shipment only)			
42-44 kerosene	4.75 – 5.00	5.00	4.75
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
42-44 kerosene	4.75	4.75 – 5.00	4.50 – 4.75
CALIFORNIA			
38-40 w.w. kerosene	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50

NEUTRAL OIL

Vis.			
PENNSYLVANIA	**(Viscosity at 70°F.)**		
200 No. 3 Assoc. Filt.	34.00 –34.50	34.00 –34.50	34.00 –35.00
180 No. 3 Assoc. Filt.	32.00 –32.50	32.00 –32.50	31.00 –32.50
150 No. 3 Assoc. Filt.	27.50 –28.00	27.50 –28.00	26.50 –28.00
	(Non Viscous)		
34 Grav. 330-340 Flash	7.25 – 7.75	7.25 – 7.75	7.00 – 8.00
36 Min. Neut. 300-305 Flash	6.50 – 7.00	7.00 – 7.50	6.50 – 7.50
****OKLAHOMA**			
Vis. Color	**(Viscosity at 100°F.)**		
100—No. 2	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
150—No. 3	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
150—No. 4	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
180—No. 4	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
180—No. 5	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
200—No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200—No. 4	9.50 –10.75	9.50 –10.75	9.50 –10.75
200—No. 5	8.50 –10.50	8.50 –10.50	8.50 –10.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	14.00	14.00	14.00
240—No. 4	13.50	13.50	13.50
240—No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280—No. 3	16.00 –17.00	16.00 –17.00	16.00 –17.00
280—No. 4	15.25	15.25	15.25
280—No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300—No. 5-6	17.00	17.00	17.00
GULF COASTAL			
Vis. Color	**(Viscosity at 100° F., pour test 0)**		
100—No. 2 Unfilt. Pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
200—No. 3 Unfilt. Pale	9.50 –10.00	9.50 –10.00	9.50 –10.00
300—No. 3 Unfilt. Pale	10.50 –11.50	10.50 –11.50	10.50 –11.50
500—No. 3½ Unfilt. Pale	12.50 –13.00	12.50 –13.00	12.50 –13.00
750—No. 4 Unfilt. Pale	15.00 –15.50	15.00 –15.50	15.00 –15.50
200—No. 5½ Red Oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300—No. 5½ Red Oil	9.50 –10.00	9.50 –10.00	9.50 –10.00
500—No. 6 Red Oil	10.50 –11.50	10.50 –11.50	10.50 –11.50
750—No. 6 Red Oil	13.50 –14.00	13.50 –14.00	13.50 –14.00
CALIFORNIA			
Vis. Color	**(Viscosity at 100°F.)**		
100—No. 2	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
100—No. 3	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
200—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
300—No. 3	10.50 –11.00	10.50 –11.00	10.50 –11.00
450—No. 3-3½	13.00 –13.50	13.00 –13.50	13.00 –13.50
550—No. 3-3½	14.50 –15.00	14.50 –15.00	14.50 –15.00
600—No. 3-3½	15.00 –15.50	15.00 –15.50	15.00 –15.50
100—No. 5	6.50	6.50	6.50
200—No. 5	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300—No. 5	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
400—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
500—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
600—No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
700—No. 7	14.00 –14.50	14.00 –14.50	14.00 –14.50

CYLINDER STOCKS

****OKLAHOMA**			
190-200 Vis. at 210° Brt. St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis. at 210° Brt. St.	25.00 –27.00	25.00 –27.00	25.00 –27.00
600 E St. 140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	9.00 –10.00	9.00 –10.00	9.00 –10.00
600 St. Ref. Dark Green	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA	**(1-inch Immersion Test)**		
600 Steam Refined	10.00 –10.50	10.00 –10.25	9.50 –10.25
650 Steam Refined	12.00 –12.50	12.00 –12.50	12.00 –12.50
600 Flash	16.50 –17.50	16.50 –17.50	16.50 –17.50
625 Flash	27.00 –28.00	27.50 –28.50	27.50 –28.50
600 Warren E	18.50 –19.50	18.00 –19.00	18.00 –19.00
600 Oil City E	17.00	17.00	17.00
600 D Filtered	25.50 –26.00	25.50 –26.00	25.50 –26.00
Cold Test Stocks (brt. filt.)	34.00 –34.50	34.00 –34.50	34.00 –34.50
Cold Test Stock (dark filt.)	31.50 –32.00	31.50 –32.50	31.50 –32.50

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

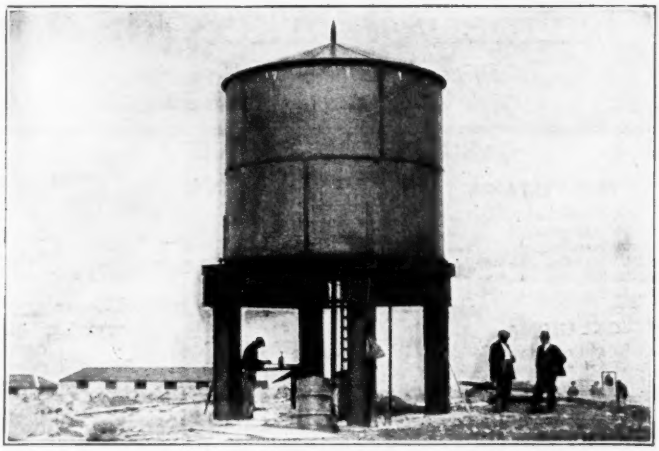
†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATIONS ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

A Settin' on Top of the World

On top of Pikes Peak, 14,109 feet above sea level, NO-OX-ID protects this water tank owned by the Cog Wheel Railroad, from which water for their engines and for domestic use is drawn. The tank is coated inside and outside. In winter it is drained to prevent freezing.

NO-OX-ID has gained great prestige in the oil industry—for its long service, for its effectiveness, for its economy.

Truly it is sitting on top of the world.



NO-OX-ID is the real solution to the problem of rusting and corrosion on buried tanks, pipe lines, and all iron and steel equipment.

DEARBORN CHEMICAL COMPANY

310 S. Michigan Ave. Chicago, Ill.

299 Broadway, New York

Traction Terminal Building, Indianapolis

807-811 Mateo Street, Los Angeles

Commerce Building, Kansas City, Mo.

2454-2464 Dundas St., West Toronto, Canada

NO-OX-ID

IRON + OX = RUST

TRADE MARK

The Original Rust Preventive

A LUMBER WAGON AND A ROLLS-ROYCE

Are somewhat different and yet alike, inasmuch as they both have four wheels. The same holds true in the difference between the requirements of a gasoline tank of the old fashioned wagon delivery and the modern bus chassis. Brown Certified Tanks are custom built for the particular chassis for which they are intended. We are specialists in this line and ask that you let us figure on your requirements.

Speed with Safety

BROWN SHEET IRON & STEEL CO.

964 Berry Ave. **St. Paul, Minn.**

DON'T DELAY—SIGN THE COUPON AND LET US KNOW WHAT YOU WILL NEED.

Check Items on which you want prices.

Complete Bulk Station ..... Number of Tanks ..... Size .....

Filling Station Tanks ..... Size ..... Pumps .....

Truck Tanks ..... Size ..... Compts .....

Other Equipment .....

Name ..... Address .....

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(For quick reference to Refinery prices, get the OIL PRICE HANDBOOK, published annually)

WAX

PENNSYLVANIA Per Pound, New York	Prices Oct. 10	Prices Oct. 3	Prices Sept. 26
122-124 white crude scale.	3.25	3.125– 3.25	3.125
124-126 white crude scale.	3.25	3.125– 3.25	3.125– 3.25
OKLAHOMA			
**124-126 Semi-refined...	2.875– 3.125	2.75 – 3.00	2.75 – 3.00
CALIFORNIA			
White crude scale, per pound.....	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil.....	4.75	4.75	4.625– 4.75
30-34 fuel oil	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
28-32 fuel oil.....	4.50 – 4.625	4.50 – 4.625	4.50 – 4.625
OKLAHOMA			
38-40 straw distillate.....	3.25	3.125– 3.25	3.125– 3.25
36-38 straw distillate....	3.00	3.00	3.00
32-36 gas oil, cracked....	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
32-36 gas oil, str. reduced.	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
28-30 fuel oil (in bbls.)..	$0.95 – 1.00	$0.95 –$1.00	$0.95 –$1.00
26-28 fuel oil (in bbls.)..	$0.90 – 0.95	$0.90 – 0.95	$0.90 –$0.95
24-26 fuel oil (in bbls.)..	**$0.875–0.90	**$0.85– 0.875	**$0.85–$0.875
22-26 fuel oil (in obls.)..	**$0.85	**$0.825– 0.85	**$0.825–$0.85
18-22 fuel oil (in bbls.)..	**$0.75– 0.80	**$0.775–0.825	**$0.775–$0.825
16-18 fuel oil (in bbls.)..	**$0.75	**$0.75– 0.775	**$0.75–$0.80
14-16 fuel oil (in bbls.)..	**$0.75	**$0.75– 0.775	**$0.75–$0.80
KANSAS (F. O. B. refinery Kansas destination.)			
38-40 straw distillate.....	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
36-38 straw distillate.....	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
32-36 gas oil.....	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
24-26 gas oil.....	*$0.95 – 1.05	*$0.95– 1.05	*$0.95 –$1.05
18-22 fuel oil.....	*$0.85 – 0.90	*$0.85– 0.90	*$0.85 –$0.90
NORTH TEXAS			
38-40 straw distillate.....	3.125– 3.25	3.125– 3.25	3.00 – 3.125
32-36 gas oil, cracked....	2.625	2.625	2.50 – 2.625
32-36 gas oil, uncracked..	2.625	2.625	2.50 – 2.625
24-26 fuel oil (in bbls.)...	$0.875– 0.90	$0.875	$0.85

GULF COASTAL	Prices Oct. 10	Prices Oct. 3	Prices Sept. 26
Fuel (in bbls.).....	$1.60 –$1.65	$1.60 –$1.65	$1.60 –$1.65
Gas oil.....	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
NORTH LOUISIANA (For Louisiana and differential territory destination)			
32-36 gas oil, dark.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
32-36 gas oil, straw.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
16-20 fuel oil (in bbls.)...	$1.075– 1.125	$1.10 – 1.15	$1.10 –$1.15
ARKANSAS (For Arkansas intrastate shipment only)			
32-36 gas oil.....	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
28-32 gas oil.....	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
Road oil	$1.25 – 1.30	$1.25 – 1.30	$1.25 – 1.30
ARKANSAS (F. O. B. Arkansas refineries for interstate shipment)			
28-32 gas oil.....	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
Smackover crude fuel....	$1.10 – 1.15	$1.10 – 1.15	$1.10 – 1.15
Road oil.....	$1.15 – 1.25	$1.15 – 1.25	$1.15 – 1.25
CALIFORNIA (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)...	$0.65 –$0.90	$0.65 –$0.90	$0.65 –$0.90
14-18 Bunker oil (in bbls.)	$0.85 –$1.00	$0.85 –$1.00	$0.85 –$1.00
30-34 gas oil (in bbls.) ...	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00
27 Plus Diesel oil (in bbls.)	$0.85 –$1.00	$0.85 –$1.00	$0.85 –$1.00

PETROLATUMS

PENNSYLVANIA (In cents per pound in tank cars; in barrels, in car lots ½c per pound more.)			
Snow White.....	9.25	9.25	8.50
Lily White.....	8.25	8.25	7.50
Cream White.....	7.25	7.25	6.50
Light Amber.....	5.50	5.50	4.00
Amber.....	4.50	4.50	3.75
Red.....	3.75	3.75	3.125
Green No. 5 color.....	3.50	3.50	2.50

**PETROLEUM COKE

(Per ton in car lots)			
Lump.....	$5	$5	$5
Still run.....	$3	$3	$3
Breeze.....	$2	$2	$2

† Prices Nominal. †† Only one refiner quoting. * Quotations only. ** Represents both sales and quotations.

Oil Products Rank High In Export Trade

WASHINGTON, Oct. 8.—Nearly $4,500,000,000 worth of foreign trade, including exports and imports, was done by the United States the first half of this year, which is slightly less than that done the first half of 1926, owing to the decline in imports. Exports totaled $2,366,678,000, or 7.2 per cent larger than a year ago. This is the largest export total for the first half of the year since 1921, according to "Our World Trade" of the Foreign Commerce Department of the Chamber of Commerce of the United States.

Gasoline, naphtha and other light products are third in value among 50 chief exports, their value amounting to $119,005,000, the first half of 1927, or 5.2 per cent of the total value of exports. This value compares with $136,062,000 the first half of 1926, a decrease of 12.5 per cent.

Lube oil exports ranked tenth in value, totaling $43,695,000, or 2.2 less than the first half of 1926. Value of kerosene ranked thirteenth, totaling $41,267,000, a decrease of 9.0 per cent from 1926.

Value of gas and fuel oil exports was $26,016,000, a gain in value of 20.6 per cent over 1926, while value of crude oil exports ranked twenty-sixth at $12,542,000 a decrease of 9.1 per cent from 1926.

In quantity, computed on a pound basis, exports of petroleum products held leading places among the first 10. Gas and fuel oil ranked second with 6,916,524,000 pounds a gain of 26.4 per cent over 1926; gasoline, naphtha and other light products third with 5,970,502,000 pounds a gain of 1.7 per cent; kerosene seventh at 2,666,528,000 pounds a decrease of 7.6 per cent; crude oil eighth, at 2,251,214,000 pounds and lube oil ninth, at 1,458,758,000 pounds.

Prairie Shipped Less Crude in September

TULSA, Oct. 8.—Shipments of crude oil through the lines of the Prairie Pipe Line Co. fell off in September, both in total and daily average. These shipments do not reflect the sales of the Prairie Oil & Gas Co., principal shipper through the lines, to the extent they did in former years. Tender shipments by other companies have this year been an important part of the Prairie Pipe business. The figures for months of this year are as follows:

Month	Total	Daily Avg.
Jan.	4,850,792	156,477
Feb.	4,736,228	169,151
Mar.	5,449,688	175,796
Apr.	5,484,826	182,827
May	5,641,544	181,985
June	5,505,551	183,518
July	5,788,133	186,714
Aug.	5,786,822	186,671
Sept.	5,321,179	177,372

TULSA.—J. C. Axelson, president, and Clyde Ellwood, sales manager, of the Axelson Machine Co., passed through Tulsa last week enroute to Los Angeles headquarters after a trip to New York and other points. They stopped off two days to visit with Tulsa representatives of their company and to visit the Exposition.

The Alliance Tank Co., Cleveland, O., which specializes in gasoline, oil storage and pressure tanks, vats, oil pits, paint kettles and varnish tanks distributed under the trade name "Thoro-Weld" tanks, has increased its authorized capital from $60,000 to $95,000. The company was organized May 19, 1926 under the laws of Ohio for manufacturing steel tanks and other plate work by the Lincoln Electric Co.'s "stable-arc" welding process.

Chicago Postoffice Buys Gasoline ¼ Cent Over Group 3 Average

Staff Special
CHICAGO, Oct. 8

CONTRACT to supply approximately 200,000 gallons of U. S. Motor gasoline to the Chicago post office over the last quarter of 1927 was awarded this week to a Chicago jobber. The post office is to pay 0.25 cent above the average Group 3 spot date of shipment with the additional provision that it shall never pay more than 6.625 cents.

Jewett & Sowers Oil Co. is the supplying jobber. The Group 3 spot is to be interpreted by daily quotations in the Chicago Journal of Commerce. But the 6.625-cent up stop is the feature that gave rise to the most comment among the trade here. A widely known jobber said he was willing to stake the profits on 25 cars of gasoline that the Group 3 price will not exceed 6.375 cents before Jan. 1. Opinion among the oil men here is divided as to whether the jobber made a good deal.

Demand for 58-60 U. S. Motor gasoline was comparatively quiet all week. Prices remained generally unchanged throughout most of the week but were slightly lower at the close. The majority of sales was made at 6.125 to 6.25 cents up to Friday when considerable sales at 6 cents appeared. Quotations on Saturday ranged from 6 to 6.25 cents, with most sellers getting 6.125 cents.

DEMAND for higher gravity gasolines was good all week. Prices of all grades were steady and generally unchanged. The 60-62, 437, e.p. gasoline sold at 6.375 cents until Thursday when it fell to 6.25 to 6.375 cents where it remained today. The 60-62, 400 e.p. gasoline sold all week at 6.625 to 6.75 cents with sales at the latter figure in the majority. The 64-66, 375 e.p. gasoline was in the best demand of the high tests. Sales of this grade were made all week at 7 to 7.125 cents.

Kerosene prices continued on the upgrade. The 41-43 water white opened at 4.25 to 4.375 cents. It sold at 4.375 cents flat Tuesday and rose Wednesday to 4.375 to 4.50 cents. By Thursday most sales were at 4.50 cents flat and continued at this figure until the week ended. While kerosene demand was not as heavy during the latter half of the week, sellers continued to ask higher prices and made a goodly number of sales. Practically all of trade here reported it was in good shape for orders and several refiners reported they were sold up for a considerable period.

Demand for distillate was not so good this week. The 38-40 straw distillate was unchanged at 3.25 to 3.375 cents.

Gas oils were in fair demand at generally unchanged prices. Ordinary dark gas oil of 32-36 gravity was selling at 2.50 to 2.625 cents Monday. It moved to 2.625 cents flat Tuesday and remained at that figure the rest of the week. Dark gas oil with zero cold test was at 2.625 to 2.75 cents all week. The 32-36 straw zero gas oil was unchanged at 3 to 3.125 cents.

Fair movement for fuel oils was reported in most quarters. While demand was not so large as last week, the trade reported that prices were steady and showed little signs of falling off. The 28-30 fuel oil was at $1.00 to $1.05. The 24-26 fuel oil brought $0.85 to $0.875. The 22-26 fuel oil was unchanged at $0.85. The 18-22 grade continued to sell at $0.80 to $0.825. Smackover quotations were unchanged at $1.05 to $1.075.

Weather forecast was for rather frequent precipitation Standard of Indiana territory. Temperatures will be near normal over the territory most of the week.

PLATT'S
OILGRAM
Petroleum Markets-Every Day

HOW SURE ARE YOU?

If you were to place an order *today* for gasoline, or kerosene, or fuel oil, or lubricating oil—

How sure would you be that you were buying *at the right time* and *at the actual market?*

Did you hear of a tankwagon cut today in another territory, which might indicate a cut coming in yours? Or, did crude change today? Or, did some one put in a big buying order for export which will stiffen the gasoline market ¼ cent or so tomorrow?

A large part of your profits come from *daily accurate knowledge* of market prices and conditions.

PLATT'S OILGRAM brings you this market information from an unbiased source daily. Costs only 30 cents a day—a year for $75, or 3 months for $25. It's your greatest aid to showing PROFIT at the end of the year.

TULSA—904 World Bldg.
CHICAGO—35 E. Wacker Drive
NEW YORK—342 Madison Ave.
CLEVELAND—710 Penton Bldg.

Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of New York—Correction: State tax on gasoline in New Hampshire has been 3 cents since June 1, on which date it was increased 1 cent. Gasoline prices were increased 1 cent to cover on that date. Prices are corrected in the table in this week's issue.

* * *

Standard of Indiana—T.w. and s.s. prices gasoline reduced 2 cents, Detroit, to 15.8 cents and 17.8 cents, including 3 cent state tax, **Oct. 5.**

* * *

Standard of Louisiana—T.w. price gasoline reduced 1 cent, s.s. price 5 cents, New Orleans, both to 13.5 cents, including 3 cent state and parish tax, **Oct. 2.**

* * *

Magnolia Petroleum—T.w. and s.s. prices gasoline reduced 1 cent, San Antonio and El Paso, to 13 cents and 15 cents at San Antonio on **Sept. 24** and 15 cents and 17 cents at El Paso on **Sept. 26.**

* * *

Continental Oil—S.s. price gasoline reduced 2 cents, Denver, to 16 cents, including 3 cent state tax, **Oct. 5.** S.s. price reduced 1 cent. Pueblo, to 18 cents, **Oct. 8.** T.w. prices unchanged.

Sinclair Cuts Toledo Gasoline

CLEVELAND, Oct. 10.—On Oct. 1 when Standard Oil Co. of Ohio reduced tank wagon and service station prices 2 cents per gallon through Ohio generally Sinclair Refining Co. reduced prices at Toledo 3 cents.

Jenney Mfg. Cuts Boston Gasoline

BOSTON, Oct. 10.—On Oct. 4 Jenney Mfg. Co., large gasoline distributor here, reduced service station prices of gasoline at Boston and suburbs, 1 cent, to 17 cents per gallon, same as tank wagon price. Other companies had not met the price officially up to Oct. 10.

Eastern Kentucky Refinery Market

ASHLAND, Oct. 10.—High gravity gasolines and kerosene are in good demand. No. 68-70 grade is available. Prices of all products are unchanged over last Monday, Oct. 3, except 24-26 fuel oil which is down ⅛ cent. Prices on Oct. 10 were:

60-62, 400-425 e.p. gasoline	9.25
64-66, 375-390 e.p. gasoline	9.50
41-43 w.w. kerosene	6.50
34-36 gas oil	4.75
24-26 fuel oil	3.375
14-16 fuel oil	3.375

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

(OIL PRICE HANDBOOK has t.w. and s.s. markets for whole year arranged for quick reference)

These Prices In Effect October 10, 1927

S.O. NEW JERSEY TERRITORY

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Atlantic City, N. J.	16	2	18	20	14
Newark, N. J.	16	2	18	20	14
Annapolis, Md.	16	4	20	23	12
Baltimore, Md.	16	4	20	23	10
Cumberland, Md.	16	4	20	23	14
Washington, D. C.	16	2	18	21	12
Danville, Va.	16	4½	20.5	*	14
Norfolk, Va.	16	4½	20.5	23.5	12
Richmond, Va.	14	4½	18.5	21.5	14
Roanoke, Va.	16	4½	20.5	23.5	14
Petersburg, Va.	16	4½	20.5	23.5	14
Williamsburg, Va.	16	4½	20.5	23.5	14
Charleston, W. Va.	16	4	20	23	14
Clarksburg, W. Va.	16	4	20	21	14
Keyser, W. Va.	16	4	20	*	14
Parkersburg, W. Va.	13	4	17	20	14
Wheeling, W. Va.	16	4	20	23	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	23	14
High Point, N. C.	16	4	20	20	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	23	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

*New York City	17	0	17	21	15
Albany, N. Y.	17	0	17	19	15
Buffalo, N. Y.	15	0	15	18	14
†Rochester, N. Y.	13	0	13	16	13
Syracuse, N. Y.	17	0	17	19	15
Boston, Mass.	17	0	17	18	15
Augusta, Me.	17	3	20	22	15
Manchester, N. H.	17	3	20	22	15
Burlington, Vt.	17	3	20	22	15

*In steel barrels.

†It is reported that S. O. New York is selling a second grade of gasoline at Rochester, 4c below the above posted prices which apply on its Socony grade.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*22	14
Philadelphia, Pa.	15	*	15	*21	14
Allentown, Pa.	16	*	16	*22	14
Erie, Pa.	12	*	12	*18	14
Scranton, Pa.	16	*	16	*22	14
Altoona, Pa.	16	*	16	*22	14
Dover, Del.	16	3	19	22	14
Wilmington, Del.	16	3	19	22	14
Providence, R. I.	17	2	19	19	15
Boston, Mass.	17	0	17	17	15
Springfield, Mass.	17	0	17	17	15
Worcester, Mass.	17	0	17	17	15
Hartford, Conn.	19	2	21	22	15
New Haven, Conn.	19	2	21	21	15

*3-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	13	5	18	21	15.5
Louisville, Ky.	14	5	19	22	15
Covington, Ky.	14	5	19	22	15.5
Clarksdale, Miss.	13	4	17	20	13.5
Gulfport, Miss.	††14.5	4	††18.5	21.5	14
Jackson, Miss.	13	4	17	20	13.5
Natchez, Miss.	12.5	4	16.5	19.5	14
Vicksburg, Miss.	12.5	4	16.5	19.5	14
Birmingham, Ala.	14	4	18	21	15.5
Mobile, Ala.	13	4	17	20	15
Montgomery, Ala.*	15	4	19	22	16.5
Atlanta, Ga.	12	4	16	18	†15.5
Augusta, Ga.	15	4	19	22	†16.5
Macon, Ga.	15	4	19	22	†16.5
Savannah, Ga.	12	4	16	18	†14.5
Jacksonville, Fla.°	13	5	18	21	14
Miami, Fla.°	15	5	20	23	15.5
Tampa, Fla.°	12	5	17	20	14
Pensacola, Fla.°	**14	5	**19	22	15

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia kerosene prices include 1c state tax.

°Florida gasoline prices include ½c inspection fee.

**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Chicago, Ill.	14	2	16	18	12
Decatur, Ill.	8.5	2	10.5	12.5	12.1
E. St. Louis, Ill.	13.1	2	15.1	17.35	11.2
Joliet, Ill.	14.4	2	16.4	18.4	12.3
Peoria, Ill.	10	2	12	12	12.1
Quincy, Ill.	14.2	2	16.2	18.2	11.9
Indianapolis, Ind.	12.2	3	15.2	15.2	13.2
Evansville, Ind.	14	3	17	19	13
South Bend, Ind.	12	3	15	15	13.4
Detroit, Mich.	12.8	3	15.8	17.8	13.7
Grand Rapids, Mich.	12.5	3	15.5	17.5	13.6
Saginaw, Mich.	14.9	3	17.9	19.9	13.8
Green Bay, Wis.	14.6	2	16.6	18.6	12.4
Madison, Wis.	14.3	2	16.3	18.3	12.1
Milwaukee, Wis.	14.1	2	16.1	18.1	11.9
La Crosse, Wis.	15.2	2	17.2	19.2	13
Minneapolis, Minn.	12	2	14	14	12.9
Duluth, Minn.	13.5	2	15.5	17.5	12.9
Mankato, Minn.	15.1	2	17.1	19.1	12.7
Des Moines, Ia.	14	3	17	19	12.3
Davenport, Ia.	14.5	3	17.5	19.5	12.3
Sioux City, Ia.	14.1	3	17.1	19.1	11.9
Mason City, Ia.	14.5	3	17.5	19.5	12.3
St. Louis, Mo.	*13.6	2	15.6	17.9	11.3
Kansas City, Mo.	†12.9	2	14.9	16.9	10.6
St. Joseph, Mo.	†12.5	2	14.5	16.5	11.2
Fargo, N. D.	15	2	17	19	14.9
Grand Forks, N. D.	17.2	2	19.2	21.2	15.2
Minot, N. D.	16.9	2	18.9	20.9	14.9
Pierre, S. D.	15.5	4	19.5	21.5	13.9
Huron, S. D.	12.5	4	16.5	18.5	13.9
Wichita, Kans.	12.8	2	14.8	16.8	10.8
Bartlesville, Okla.	12.8	3	15.8	17.8	10.8

S. O. Indiana Q. D. A. schedule on tank wagon deliveries of gasoline, effective March 3 thru territory, except Wisconsin effective March 4: 50 gals. and over on delivery, 1c discount, except in city of Chicago where 1c discount applies on 100 gals. and over; 6,000 gals. and over per month, 1½c; 10,000 gals. and over per month, 2c; 15,000 gals. and over per month 3c, except latter discount does not apply in Chicago.

Service station discounts: 200 gals. or more per month, and 2400 gals. or more per year, 2c per gal.

March 1, 1c discount on kerosene in 50 gal. dumps thru territory.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. NEBRASKA

Omaha, Neb.	14.25	2	16.25	16.25	12.25
McCook	12.75	2	14.75	16.75	11.50
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	19.75	13.50
Scottsbluff	15.25	2	17.25	19.25	13.00

CONTINENTAL OIL

Denver, Colo.	13	3	16	16	12.5
Pueblo, Colo.	14	3	17	18	14.5
Grand Junction, Colo.	17.5	3	20.5	22.5	18
Casper, Wyo.	14	3	17	19	13
Cheyenne, Wyo.	15	3	18	20	14.5
Butte, Mont.	19	3	22	22	19
Helena, Mont.	19.5	3	22.5	24.5	19
Salt Lake City, Utah	17.5	3½	21	23	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	19	3	22	26	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

S. O. LOUISIANA

Little Rock, Ark.	13	5	18	21	12
Alexandria, La.	13	2	15	18	†14
Baton Rouge, La.	12	2	14	17	†12.5
Lake Charles, La.	13.5	2	15.5	18.5	†14
New Orleans, La.	*11.5	2	*13.5	*13.5	*14
Shreveport, La.	13.5	2	15.5	18.5	†13
Lafayette, La.	13	2	15	18	†13.5
Bristol, Tenn.	16	3	19	22	14
Chattanooga, Tenn.	16.5	3	19.5	22.5	15
Knoxville, Tenn.	16.5	3	19.5	22.5	15
Nashville, Tenn.	15	3	18	21	15
Memphis, Tenn.	12	3	15	18	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. OHIO

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
All Ohio points	14	3	17	19	14

MAGNOLIA PETROLEUM

Muskogee, Okla.	12	3	15	18	9
Oklahoma City	10	3	13	14	9
Tulsa, Okla.	12	3	15	18	9
Fort Smith, Ark.*	11	*3	14	17	12
Little Rock, Ark.	11	5	16	18	12
Texarkana, Ark. *	12	*3	15	18	12
Dallas, Tex.	11	3	14	17	11
Fort Worth, Tex.	11	3	14	16	10
Houston, Tex.	10	3	13	15	15
San Antonio, Tex.	10	3	13	15	10
El Paso, Tex.	12	3	15	17	16

*Within City of Texarkana and Fort Smith, the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In these two districts outside of the city the 5c Arkansas tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M. & P. Naphtha	Cleaner Naphtha
Chicago	16	18	18
Detroit	17.7	19.7	19.7
Kansas City	16.2	†18.2	†18.2
Milwaukee	16.7	*20.7	*20.7
Minneapolis	*20	*22	*22
St. Louis	15.9	17.9	17.9
New York	...	19	....

*Includes 2c state tax.

†Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	36	26
Ft. William	24.5	3	27.5	31	23 5

MANITOBA

Winnipeg	24.5	3	27.5	31	23.5

SASKATCHEWAN

Regina	27.5	0	27.5	32	26.5

ALBERTA

Edmonton	26.5	3	29.5	33	25.5
Calgary	22.5	3	25.5	29	23.5

BRITISH COLUMBIA

Vancouver	21	3	24	27	22

QUEBEC

Montreal	20.5	3	23.5	27	21
Quebec City	22.5	3	25.5	31	23
Three Rivers	22.5	3	25.5	30	23

NEW BRUNSWICK

St. John	24.5	3	27.5	32	24
Moncton	24.5	3	27.5	32	24

NOVA SCOTIA

Halifax	24.5	3	27.5	32	24
Sydney	24.5	3	27.5	32	24

PRINCE EDWARD ISLAND

Charlottetown	24.5	3	27.5	31	24

Note: In districts surrounding these points 1c additional is added to city price.

Fair Weather in East Increases Activity in Gasoline Market

Staff Special
NEW YORK, Oct. 8

CONTINUANCE of fair weather along the Atlantic seaboard this week brought a large number of the jobbing trade into the market for gasoline. Fair week-ends have been the exception rather than the rule in the east this year and a few bright sunshiny days apparently are all that is required to stimulate the gasoline market.

Spot demand at most points along the coast was reported fairly good and jobbers also were freer in ordering out their contract commitments. A number of sellers in New York reported that a large volume of orders had been received this week for goods to move out Oct. 10, which indicated to them that jobbers in looking ahead foresaw an appreciable reduction in stocks should they be fortunate enough to get another week-end of fair motoring weather.

In spite of more active demand, slight recessions were noted in gasoline prices at several points along the seaboard. At least one company in New York and one company in Philadelphia maintained prices of 8.25 cents for U. S. Motor gasoline in tank cars this week but by far most sellers were offering this commodity at 8 cents, f.o.b. refinery or seaboard terminal, and it was generally believed that the bulk of goods sold this week went at the latter figure.

Prices at Baltimore and most points further south were generally unchanged. At New England points, leading sellers reduced their prices approximately 0.25 cent early in the week and fair movement of U. S. Motor gasoline was reported at 8.25 to 8.50 cents thereafter. However, it was also asserted that goods could be bought at a shade under 8.25 cents, one buyer having been offered 8.125 cents firm for a barge load of U. S. Motor. The seller also indicated that even this figure might be shaded if the purchase were deferred a week or 10 days.

The 1-cent reduction in retail prices at Boston made by the Jenney Mfg. Co. Oct. 4 was not met by other major service station operators in this vicinity. Just what effect Jenney's reduction would eventually have on the retail market at Boston was problematical, but some in the trade were inclined to think it was the forerunner of a general reduction in tank wagon and service station prices in New England.

Certain dealers were of the opinion that the reduction had a bearing on local markets only and pointed out that fluctuating local prices were more or less the feature of markets in New England all summer, whereas others cited the fact that the period of high consumption for 1927 was nearing an end, and lower retail markets were getting their start in Boston.

Kerosene prices held fairly steady at most points along the seaboard until near the end of the week when a few dealers were offering water white goods, 41-43 gravity, at 6.50 cents a gallon. The quotations of other leading dealers for this grade were unchanged at 7 cents. Continued slack demand from the jobbing trade was asserted to be the cause of the easier market.

A more active gas oil market which was anticipated for October so far has failed to materialize. Some sellers at New York hold their prices for 28-34 gas oil at 5 cents, while others are offering the grade at 4.75. In the New England district jobbers continued to report their ability to buy gas oil at 5 cents a gallon.

Bunker oil was more active this week at the lower prices established a week ago. Grade C was reported in good demand at $1.55 a barrel at New York and Philadelphia and at $1.60 to $1.65 at Boston. Diesel oil was unchanged at $2.10 a barrel at New York.

Kerosene Scarce in Gulf Market; Quotations Are Advanced

Staff Special
NEW YORK, Oct. 8.

KEROSENE virtually monopolized interest in Gulf export markets this week. Demand from foreign buyers for this commodity failed appreciably to improve but continued scarcity of supply together with the fact that the period of largest consumption is close at hand resulted in quoted prices at the Gulf being advanced approximately 0.25 cent over the levels of a week ago.

As early as Monday several leading exporters advanced their quotations for water white and prime white to 7.25 cents and 6.25 cents, respectively. Others put their asking prices up to 7.50 cents and 6.50 cents, respectively, saying they had no kerosene at the Gulf which they could offer and prices they would have to pay in the field would forced these quotations. Still others, those who had any appreciable quantity on hand at the Gulf which they could offer, held their prices at 7 cents and 6 cents and felt that increased production of kerosene which higher markets throughout the country would doubtless bring, would prevent further scarcity of supply and prices from going higher.

A number of the trade reported a thorough search of the Mid-Continent had failed to reveal any appreciable supply of kerosene available. One large exporter was in the market bidding 4.375 cents in the Mid-Continent for water white goods, and the fact that several refiners were willing to move sizeable quantities at 4.50 cents indicated that the supply was not so scarce as many were inclined to believe.

Inquiries from foreign buyers for kerosene, or for any commodity for that matter, were few this week and consequently little business was transacted from which an actual selling market could be determined. A Scandinavian buyer purchased approximately 35,000 barrels of prime white kerosene for October-November loading at the Gulf at a reported 6.25 cents. Well informed sources asserted the business was placed at 6 cents.

Today all sellers held their quotations for water white and prime white in full cargo lots at a minimum of 7.25 cents and 6.25 cents, but one or two indicated that 7 cents and 6 cents might be done if the kerosene were a selling medium for gasoline.

Gasoline quotations fluctuated but little. U. S. Motor was generally quoted at 7.25 to 7.50 cents but a leading broker reported offering a cargo of this grade firm at 7.125 cents. The 61-63, 390 end point and 64-66, 375 end point grades were largely quoted all week at 7.875 to 8 cents and 8.375 to 8.50 cents, respectively.

A British buyer was in the market for two cargoes of 60-62, 390 end point gasoline for November lifting, each cargo to comprise between 65,000 and 75,000 barrels. According to reports orders had not been placed up to the close of business today.

Gas oil quotations were advanced 0.125 cent. The firm offer of a cargo of 26-28 gravity translucent gas oil at 4.25 cents, the Gulf, made last week held good this week but there were no takers. The 30-32 gravity gas oil was largely quoted at 4.375 cents and one or two sellers were asking 4.50 cents.

The bunker oil market was down approximately 5 cents a barrel. Grade C was offered as low as $1.20.

White crude scale was largely quoted at 3 cents a pound at the Gulf and fully refined wax was held 1 cent a pound higher. Two or three sizeable sales were reported at these prices.

Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the years 1924-1925-1926)

Eastern Domestic Markets

(Prices in bulk except where otherwise noted f.o.b. refinery or seaboard plant)

	Oct. 10	Oct. 3
U. S. Motor gasoline, tank cars, New York Harbor	8.00	8.00 – 8.25
U. S. Motor gasoline, tank cars, Philadelphia	8.00	8.00 – 8.25
U. S. Motor gasoline, tank cars, Baltimore	8.00 – 8.25	8.00 – 8.25
U. S. Motor gasoline, tank cars, *Boston	8.00 – 8.50	8.25 – 8.50
U. S. Motor gasoline tank cars, Norfolk	8.00	8.00 – 8.25
U. S. Motor gasoline tank cars, Charleston	8.00	8.00
U. S. Motor gasoline tank cars, Jacksonville	7.75	7.75
U. S. Motor gasoline tank cars, *Providence	8.00 – 8.50	8.25 – 8.50
U. S. Motor gasoline tank cars, Savannah	7.75	7.75
California U. S. Motor gasoline, tank cars, Philadelphia	8.00 – 8.25	8.00 – 8.25
California U. S. Motor gasoline, tank cars, Baltimore	8.00 – 8.50	8.00 – 8.50
41-43 w.w. kerosene, New York	6.50 – 7.00	6.75 – 7.00
41-43 w.w. kerosene, Philadelphia	6.50 – 7.00	6.75 – 7.00
41-43 p. w. kerosene, *Boston	7.00	7.00
28-34 gas oil, New York	4.75 – 5.00	4.75 – 5.00
28-34 gas oil, *Boston	4.75 – 5.00	5.00
38-42 furnace oil, New York	6.00	6.00
36-40 Furnace Oil, *Boston	6.25	6.25
Grade C bunker oil, New York	$1.55	$1.55
Grade C bunker oil, *Boston	$1.60	$1.60 –$1.65
Diesel oil, New York	$2.10	$2.10
Russian 885-890 s.g., 325-330 vis. medicinal		
Russian 870-875 s.g., 150-155 vis. medicinal		
Russian 860-865 s.g., 80-85 vis. medicinal		

*F.O.B. New England refineries and seaboard terminals.

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are all Penna. products, prices per gal. in bbls.)

	Oct. 10	Oct. 3
U. S. Motor gasoline	24.40	24.40
43-45, 150 w.w. kerosene	18.15	18.15
42-44, 110 s.w. kerosene	17.15	17.15
CYLINDER OILS		
Bright stock, dark	40.00 –41.00	40.00 –41.00
Filtered D 600	31.00 –32.00	31.00 –32.00
Filtered E 600 Warren	25.00 –26.00	25.00 –26.00
Unfiltered 600 s.r.	17.50	16.50 –17.50
Unfiltered 650 s.r.	18.50	17.50 –18.50
600 Flash s.r.	22.00 –23.00	22.00 –23.00
630 Flash s.r.	33.00	33.00
RED ENGINE OILS (Vis. 100°)		
300 vis. No. 6½ color	20.00	20.00
250 vis. No. 6 color	19.00	19.00
200 vis. No. 6 color	18.50	18.50
PALE ENGINE OILS (Vis. 100°)		
230 vis. No. 3¾ color	24.00	24.00
180 vis. No. 3¼ color	20.00	20.00
100 vis. No. 2¼ color	15.75	15.75
MOTOR OILS (Vis. 100°)		
600 vis. No. 7 color	35.00	35.00
500 vis. No. 6½ color	33.00	33.00
400 vis. No. 7¼ color	31.00	31.00
300 vis. No. 6 color	30.00	30.00
200 vis. No. 3¼ color	24.00	24.00
MEDICINAL OILS		
875-885 s.g.		
865-870 s.g.		

WAXES (Pa. stocks; in cents per pound, f.a.s. carload lots)

WHITE CRUDE SCALE (In barrels)	Oct. 10	Oct. 3
122-124 A.m.p.	3.25	3.00 – 3.125
124-126 A.m.p.	3.25	3.00 – 3.125
FULLY REFINED (In burlap bags)		
123-125 A.m.p. Philadelphia	4.125– 4.25	4.25
125-127 A.m.p.	4.125– 4.25	4.25
128-130 A.m.p.	4.375	4.25 – 4.375
130-132 A.m.p.	4.75	4.50 – 4.625
133-135 A.m.p.	*5.75	*5.75
135-137 A.m.p.	*5.75 – 6.25	*6.00 – 6.50
YELLOW CRUDE SCALE		
124-126 A.m.p.	2.875– 3.00	2.875– 3.00

* Prices Nominal

Gulf Export Market

(F.o.b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over, except where otherwise noted.)

GASOLINE	Oct. 10	Oct. 3
U. S. Motor	7.25 – 7.50	7.375– 7.50
61-63, 390 e.p.	7.875– 8.00	7.875– 8.00
64-66, 375 e.p.	8.375– 8.50	8.375– 8.50
U. S. Motor, cases (cargo lots)	$1.65	$1.65
64-66, cases (cargo lots)	$1.80	$1.80
KEROSENE		
44 water white	7.25	7.00
41-43 prime white	6.25	6.00
Water white, cases (cargo lots)	$1.60	$1.60
Prime white, cases (cargo lots)	$1.50	$1.50
DOMESTIC GAS AND BUNKER OILS		
*26-28 gas oil	4.25	4.125– 4.25
*30-32 gas oil	4.375	4.25
Grade C bunker oil	$1.40 – 1.45	$1.40 –$1.45
Grade C bunker oil, cargoes	$1.20 – 1.30	$1.25 –$1.30

*Translucent thru neck of 4 oz. bottle.

MEXICAN CRUDE AND BUNKER OILS (F.o.b. steamer, Tampico)		
Heavy Panuco crude taxes to be paid	$1.15	$1.15
Grade C bunker oil, for bunkering purposes, taxes paid	$1.50	$1.50

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F; cold test 0 (Tanker, f.o.b. Houston)

100 vis. No. 2 unfiltered pale	6.00 – 6.25	6.00 – 6.25
200 vis. No. 3 unfiltered pale	8.50 – 9.00	8.50 – 9.00
300 vis. No. 3 unfiltered pale	9.50 –10.00	9.50 –10.00
500 vis. No. 3½ unfiltered pale	11.00 –12.00	11.00 –12.00
200 vis. No. 5½ red oil	7.00 – 8.00	7.00 – 8.00
300 vis. No. 5½ red oil	8.00 – 9.00	8.00 – 9.00
500 vis. No. 6 red oil	10.00 –10.50	10.00 –10.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Oct. 10	Oct. 3
Gasoline, U. S. Motor, 53-55 Gravity		6.00 – 7.00
Gasoline, U. S. Motor, blends and special cuts		7.00 – 8.00
Gas Oil, 30-34, per bbl.		$0.90 –$1.00
Diesel Oil, 27 plus, per bbl.		$0.80 –$1.00
Bunker Oil, 14-18, per bbl.		$0.85 –$1.00
Fuel Oil, 14-18, per bbl.		$0.80 –$0.90
Kerosene, 38-40 w.w., 125-150 flash, in gals.		4.50 – 5.00
Cased Goods		
Gasoline, U. S. Motor		$1.70 –$1.80
Kerosene, 38-40, w.w., 125-150 flash		$1.35 –$1.50

Wax Trading is Active In New York

Staff Special

NEW YORK, Oct. 8.—Considerable trading was reported in the New York wax market this week. Demand from foreign buyers was comparatively slow but domestic buyers were more active. However, most of the activity was confined to trading between brokers.

One or two sales involving sizeable quantities of white crude scale were reported at 3 cents a pound early in the week. The situation tightened somewhat as the week advanced and at close of business today this commodity was held at 3.25 cents.

The market for fully refined waxes fluctuated but little; low melting point grades were quoted 0.125 cent lower by one or two dealers and, generally, the high melting points were up 0.125 to 0.25 cent. The supply of fully refined waxes continues relatively scarce.

A number of the trade reported the advancing wax market a bit puzzling to them, particularly in view of the large stocks that are reported at some refineries and the relative inactivity of foreign buyers. One or two dealers intimated there would be some interesting developments in the wax market in the next 10 days or two weeks.

The export demand for lubricating oils was only fair. Prices for 600 steam refined and 650 steam refined cylinder stocks were up approximately 0.5 cent over last week, but other grades were unchanged in price and the market was reported a bit "sloppy." Neutral oils and bright stocks were slightly easier; exporters reported their ability to buy these oils in the field now, whereas they were unobtainable a week or two weeks ago.

Western Pennsylvania Market

CLEVELAND, Oct. 10.—Kerosene and fuel oil are leaders in activity in the western Pennsylvania field during the past week. Refiners report many inquiries for October and November shipments. Prices have been advancing on both products. U. S. Motor gasoline has been fairly active with slightly higher prices prevailing today. Neutral and cylinder stocks have been steady without fluctuations. Wax is in strong demand. Petrolatums are active with prices unchanged the past week.

Crude Oil Prices, as Posted by Major

(Crude prices for years 1924-1925-1926 in

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$2.65
Bradford District Oil in National Transit Lines (Bradford District)	2.65
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.55
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.55
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.50
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.25
Keister Grade in National Transit Lines (Butler Co.)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.40
Corning Grade in Buckeye Pipe Lines (Ohio)	1.45
Corning, O. heavy grade	1.35
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.50
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1922, takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines.....$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective March 14, 1927

Wooster	$1.57	Plymouth	$1.33
Lima	1.71	West. Kentucky	1.33
Waterloo	1.35	*Canadian Petro.	2.11
Indiana	1.48	*Oil Springs	2.18
Princeton	1.60	*Posted by Imperial Oil Ltd.	
Illinois	1.60		

OKLAHOMA, KANSAS And NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective March 12, 1927

28-28.9	$1.12	35-35.9	$1.26
29-29.9	1.14	36-36.9	1.28
30-30.9	1.16	37-37.9	1.30
31-31.9	1.18	38-38.9	1.32
32-32.9	1.20	39-39.9	1.34
33-33.9	1.22	40-40.9	1.36
34-34.9	1.24	41-41.9	1.38
42-42.9	$1.40	48-48.9	$1.52
43-43.9	1.42	49-49.9	1.54
44-44.9	1.44	50-50.9	1.56
45-45.9	1.46	51-51.9	1.58
46-46.9	1.48	52 and above	1.60
47-47.9	1.50		

Above schedule met on March 12, by Gulf, Mid-Continent Pet. Corp., and Empire; by Carter, Humble and the Texas Co. on March 14.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

March 14, same schedule as Prairie in above fields.

Mirando, Tex.....$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Effective Sept. 14, Magnolia posted same price schedule as Prairie in above fields except that Magnolia is paying $1.05 for all oil below 30 gravity.

Corsicana heavy.....$1.00

Carter Oil Co.

(Oklahoma and Kansas)

March 14, same schedule as Prairie.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective Aug. 23

Hutchinson, Carson and Wheeler Counties..$0.75

Pampa, Gray County, Effective March 14:

28-28.9	$ .80	37-37.9	$ .98
29-29.9	.82	38-38.9	1.00
30-30.9	.84	39-39.9	1.02
31-31.9	.86	40-40.9	1.04
32-32.9	.88	41-41.9	1.06
33-33.9	.90	42-42.9	1.08
34-34.9	.92	43-43.9	1.10
35-35.9	.94	44 and above	1.12
36-36.9	.96		

WEST TEXAS

Humble Oil & Refining Co.

Effective Aug. 23

Crane, Upton, Crockett and Pecos Counties...$0.60

NORTH LOUISIANA — ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto

Effective March 14, 1927

Below 28	$1.10	40-40.9	$1.36
28-28.9	1.12	41-41.9	1.38
29-29.9	1.14	42-42.9	1.40
30-30.9	1.16	43-43.9	1.42
31-31.9	1.18	44-44.9	1.44
32-32.9	1.20	45-45.9	1.46
33-33.9	1.22	46-46.9	1.48
34-34.9	1.24	47-47.9	1.50
35-35.9	1.26	48-48.9	1.52
36-36.9	1.28	49-49.9	1.54
37-37.9	1.30	50-50.9	1.56
38-38.9	1.32	51-51.9	1.58
39-39.9	1.34	52 and above	1.60

*Smackover, below 24	$0.90
* do 24 and above	1.15
Bellevue	1.25
Cotton Valley	1.00
**Urania, La	.90
†East El Dorado	1.00

**Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

*Smackover prices posted on Sept. 20 by S. O. La., Magnolia, Shreveport-El Dorado Pipe Line and Atlantic Oil Producing Co.; on Sept. 23 by The Texas Co.; on Sept. 17, La. Oil Refg. Corp.

STEPHENS, ARKANSAS

Atlantic Oil Producing Co. and Louisiana Oil Refining Corp.

Below 28	$1.00	30-30.9	$1.06
28-28.9	1.02	31-31.9	1.08
29-29.9	1.04	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling and Pierce Junction. All other fields are Grades A only.

If We Ask Federal Aid We May Get Too Much, Says Gray

W. H. GRAY, President of the National Association of Independent Oil Producers, Tulsa, has commented on the conservation issue before the oil industry as follows:

"I regret the fact that so many of the leaders of the industry have thrown their hands up admitting their inability to pilot their own industry out of the present difficulties. Many of them seem now to be anxiously soliciting the assistance of both state and federal governments. Something must be wrong! What is it?

"The question that many of us are asking ourselves is: what is behind the scenes that is not being shown in the picture? Certainly there must be something. When men of genius and talent, drawing salaries of from $50,000 to $100,000 or more a year, are willing to turn over the shaping of a policy for their business and their industry to men inexperienced in the oil business—farmers, carpenters, wagon drivers, men who go down to the state legislature and get $5 a day for 60 days every two years and sit around country post offices and whittle on goods boxes the balance of the time—there must be something indeed wrong and yet this is what many of the leaders of our industry are proposing that we do.

"There is much talk about what kind of a bill should be offered; whether the federal authorities should be invoked or state authorities. It reminds me of the story of the boy who caught the bull by the tail and in the mad rush as the bull swung through the pasture with him he hollooed to his comrades to run and help him let go of the bull. It would seem as though our industry ought to be able to let go of the bull without the aid of either state or federal authority.

"If the Rubicon is crossed and the most powerful institutions in the industry are committed to a policy of federal and state regulation they will get plenty of it—much more than they ask for. While we are in the business of regulation, why not rearrange pipe line transportation rates, both state and interstate? Why not further dissolve the Standard Oil Co.? Why not separate the pipe lines from producing companies? Why not limit the amount of acreage for development purposes which a corporation can acquire? Why not regulate the amount of deductions for sediment and b. s. which the pipe lines take from the producers? In the interest of public policy and conservation, why not require corporations to file with the corporation commission and with the Bureau of Mines all their geological maps and the results of any of their research work which the Bureau

Purchasers, in All Fields (in Effect October 10)

OIL PRICE HANDBOOK published annually)

GULF COASTAL
Prices of The Texas Co.
(Effective March 14)

Grades A	$1.20	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.37	38-38.9	$1.43
36-36.9	1.39	39-39.9	1.45
37-37.9	1.41	40 and above	1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS
Prices of Ohio Oil Co. and Midwest Refining Co.
(Salt Creek prices effective March 12)

‡Salt Creek	29-29.9	$1.14
" "	30-30.9	1.16
" "	31-31.9	1.18
" "	32-32.9	1.20
" "	33-33.9	1.22
" "	34-34.9	1.24
" "	35-35.9	1.26
" "	36-36.9	1.28
" "	37 and above	1.30
Elk Basin		1.33
Grass Creek light		1.33
Big Muddy		$1.25
Lance Creek		1.33
Rock Creek		1.25
Mule Creek		1.30
Rex Lake		1.10
‡Osage		1.33
‡Cat Creek, Mont.		1.33
Sunburst, Mont.		1.35
‡Hogback, N. Mex.		1.38
Artesia, N. Mex.		1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA
Standard Oil Co. of California

Santa Maria and Ventura Posted by Union Oil Co.

Gravity	Signal Hill Seal Beach Huntington Beach	Inglewood Torrance	Whittier La Habra	Newhall, McKittrick, Kern River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Montebello	Coyote Hills	Santa Fe Springs	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .05
15-15.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
16-16.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
17-17.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
18-18.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
19-19.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
20-20.9	.85	.85	.85	....	.85	....	.85	.85	....	.77	.77	.76	.78	.85	.85
21-21.9	.86	.86	.85	....	.86	....	.85	.86	....	.79	.79	.77	.81	.85	.85
22-22.9	.87	.87	.85	....	.87	....	.85	.87	....	.81	.81	.78	.85	.85	.85
23-23.9	.88	.88	....	....	.88	....	.85	.88	....	.83	.83	.79	.89	.85	.85
24-24.9	.89	.89	....	....	.89	$ .89	.85	.89	.85	$ .85	.85	.80	.93	.85	.85
25-25.9	.90	.90	....	....	.90	.90	.86	.90	.85	.87	.87	.81	.97	.86	.86
26-26.9	.92	.92	....	....	.92	.92	.87	.91	.85	.89	.89	.83	1.01	.87	.87
27-27.9	.94	.94	....	....	.94	.94	.88	.92	.85	.91	.91	.85	1.05	.88	.88
28-28.9	.96	.96	....	....	.96	.96	.89	.93	.86	.93	.93	.87	....	.89	.89
29-29.9	.98	....	....	....	.98	.98	.90	.94	.87	.96	.96	.89	....	.91	.91
30-30.9	1.00	....	....	....	1.00	1.00	.91	.95	.88	.99	.99	.91	....	.93	.93
31-31.9	1.03	....	....	....	....	1.03	....	....	.89	1.02	1.02	.93	....	....	.95
32-32.9	1.06	....	....	....	....	1.06	....	....	.91	1.05	1.05	.95	....	....	.97
33-33.9	....	....	....	....	....	1.09	....	....	.93	1.08	1.08	.97	....	....	.99
34-34.9	....	....	....	....	....	1.12	....	....	.95	....	1.11	.99	....	....	1.01
35-35.9	....	....	....	....	....	1.15	....	....	.97	....	....	1.01	....	....	1.03
36-36.9	....	....	....	....	....	1.18	....	....	.99	....	....	....	....	....	1.06
37-37.9	....	....	....	....	....	1.21	....	....	1.01	....	....	....	....	....	1.09
38-38.9	....	....	....	....	....	1.24	....	....	1.03	....	....	....	....	....	1.12
39-39.9	....	....	....	....	....	1.27	....	....	1.06	....	....	....	....	....	1.15
40-40.9	....	....	....	....	....	1.30	....	....	1.09	....	....	....	....	....	....
41-41.9	....	....	....	....	....	1.33	....	....	1.12	....	....	....	....	....	....
42-42.9	....	....	....	....	....	1.36	....	....	1.15	....	....	....	....	....	....

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

of Mines or the corporation commission may desire from time to time in making up their forecasts of the probable amount of oil recoverable in various areas? Why not declare all patents for refining crude oil as a public utility and subject to license and regulation by the government? These are all matters which come under the general head of conservation and economy and if put into the form of law will undoubtedly correct materially the over-production situation now so onerous and burdensome to the industry.

"Owing to the growing sentiment throughout the country in favor of the nationalization of the petroleum deposits of our country, many independent producers who favor the segregation of pipe lines from producing companies, who favor a review of their rates and regulations and who favor limiting large corporations in the acquisition of oil territory have heretofore hesitated to press this view before governmental bodies lest they accelerate to an alarming extent the growing opinion of nationalization.

"However, if the leaders of these great corporations are themselves going to appeal to these legislative bodies for legislation which smacks of sovietism, which is 100 per cent paternalism and 80 per cent socialism, they should not be heard to complain if they are met with the above-mentioned suggestions as amendments to their bill.

"Were it possible to secure by governmental legislation a limitation of production without protecting the people from the advance in the price of crude oil resulting therefrom it might be a great boon to the industry but alas, alack, it cannot be done. The public will not stand for it. The lawmakers will promptly tell us that if they are to be called on to limit the amount of oil taken from the ground they must protect the public with a balance wheel in the form of a law regulating the price at which the commodity is to be sold. It is my impression that the independent producers would rather see the ship righted without issuing the SOS for government aid but if there must be government interference they want it to fall on the just and the unjust alike—every branch of the industry should be subject to drastic regulation."

Butler Officials Catch Fish, 'Tis Said

KANSAS CITY, Mo., Oct. 8.—An 800-mile tour of the lake district of Minnesota by William A. Knapp, vice president and sales director of the Butler Mfg. Co., Kansas City and C. C. Crouch, vice president and manager of the Minneapolis office, is said to have reduced fish congestion in Minnesota's lakes considerably.

Just when a formidable array of fish was lined up at Cut Foot Sioux Lake, a Pathe News man, happened to come along, it is said, accompanied by the inevitable moving picture camera. A picture of the fish was recorded for exhibiting on the screen at movie houses and those who entertain any doubts, are asked to see for themselves.

An Indian guide, Ben Tibbetts, accompanied Mr. Knapp and Mr. Crouch on the trip.

OIL STOCKS AND FINANCES

National Petroleum News

Tide Water-Associated Omits Dividend

NEW YORK, Oct. 8.—Directors of Tide Water-Associated Oil Co. took no action this week on a dividend on the common stock which ordinarily would have been paid Nov. 1. The company paid 15 cents a share on the common Aug. 1 and 30 cents a share each quarter previously since its organization in February, 1926, as a holding company for the Tide Water Oil Co. and Associated Oil Co. It holds 78 per cent of Tide Water common stock and 94½ per cent of Associated stock.

Axtell J. Byles, president, said that while earnings of the first eight months and prospects for the last four months of 1927 indicated the common stock dividend requirements at the recent rate paid would be covered after all charges, continued overproduction with resultant unsatisfactory realizations made it advisable to take no action on a dividend until conditions in the industry showed definite signs of improvement.

Standard of N. J. Sells Block of Imperial

NEW YORK, Oct. 10.—Standard Oil Co. of New Jersey has sold the Sun Life Assurance Co. of Canada 84,876 shares of Imperial Oil, Ltd., at $55 a share. Delivery is to be made Jan. 1, 1928. Imperial has been selling at 60 or better most of the last week.

Standard of New Jersey retains ownership of 4,700,000 of the Imperial's 6,458,267 outstanding shares, or 72.7 per cent. Imperial owns about 60 per cent of the 7,118,138 outstanding shares of International Petroleum Co.

It is said in financial circles that Standard of New Jersey seeks to have strong Canadian institutions interested in Imperial Oil.

Swan-Finch Oil Reports Gain in Assets

NEW YORK, Oct. 8.—Statement of Swan-Finch Oil Corp. as of June 30 shows increase in total assets of $150,408. Current assets were $1,016,537 and current liabilities $66,520, compared with $931,298 and $48,727, respectively, June 30, 1926. Comparative condensed balance sheets as of June 30 follow:

ASSETS

	1927	1926
Fixed assets	$ 828,406	$ 758,352
Prepayments	26,533	11,954
Current assets	1,016,537	931,297
Deferred charges	.....	19,465
Total	$1,871,476	$1,721,068

LIABILITIES

Common stock	$ 861,466	$ 861,466
Preferred stock	150,500	150,500
Surplus	472,276	416,569
Reserves	320,714	243,806
Current liabilities	66,520	48,727
Total	$1,871,476	$1,721,068

Phillips to Have Refinery In Texas Panhandle

Staff Special

TULSA, Oct. 8.—Phillips Petroleum Co. will enter the refining business in the near future it was decided this week. The company will have a 10,000-barrel refinery in the Texas Panhandle where it is one of the largest producers in the field.

Since the decision has just been made to operate a refinery, plans of the company have not progressed far. It is possible that the company may purchase one of the plants now in the field and enlarge it to desired capacity. It is reported that inspection has been made of at least one plant located near Phillips properties at Borger.

Plans of the company to enter the refining division are thought by many to fit in with its recently announced intention to enter the distributing business to sell Phillips' new natural gasoline products direct to motorists. The marketing division of the company was organized under the leadership of O. L. Cordell, formerly sales manager for the Waite Phillips Co., who is one of the owners of the Alamo Refining Co. which has a 2,500-barrel plant at Borger.

When Phillips announced its special aviation gasoline such as that used by Art Goebel in his flight to Hawaii it was stated that this product was a straight natural gasoline. No statement has been made by the company as yet as to whether the automobile motor fuel to be produced will contain any refinery gasoline or naphtha. The present step of the company would indicate that some gasoline produced from crude oil will be used in the automobile motor fuel.

Phillips Petroleum Co. has five gasoline plants in the Panhandle producing about 150,000 gallons of natural gasoline a day. A large part of this gasoline is under contract to the Humble Oil & Refining Co. until next September for shipments in Humble pipe lines with Panhandle crude.

Crude production of Phillips in the Panhandle is reported to be in excess of 30,000 barrels a day. The company has a large reserve of crude in tanks which will help insure the company a supply of oil for its stills over an extended period. It is understood that tentative plans of the company include the erection of a cracking plant in connection with the refinery to obtain the largest possible yield of gasoline.

Cleveland Stock Market

October 7

	Par Value	Bid	Asked	Last Sale
Canfield Oil Co.	100	...	...	100
do pfd.	100	96½	...	100
Fred G. Clark	10	..	3	3¼
National Refining Co.	25	34	...	35
do pfd.	100	130	...	130
Paragon Refining Co.	25	8¾	8⅞	8⅝
do pfd.	100	84	...	81

x Ex-Dividend

Oil Dividends

	Amount	Stock of Record Payable	Record
Atlantic Ref. pfd. q.	$1.75	Nov. 1	Oct. 15
Salt Creek Prod. q.	75c	Nov. 1	Oct. 15
H. F. Wilcox q.	50c	Nov. 10	Oct. 15

Auto Sales Slacken; Buyers Await Ford

NEW YORK, Oct. 5.—*Automotive Industries* this week said:

Slowing down in retail sales in September will have the effect of decreasing factory operations generally in October. To some extent this is a normal seasonal development but unquestionably it has been accentuated by the Ford delay. Practically all sections of the country report buyers awaiting the new Ford—many, because of a belief that it will compel price revisions in other lines.

Under the influence of buying hesitancy, dealer stocks of new cars have shown a rising tendency, while used car stocks have remained at approximately previous levels because of lowered new car buying and consequent absence of trade-ins. In the southeast and northwest and in some middle western districts sales conditions have been good in September and promise well in October.

Transactions in Oil Shares on New York Stock Exchange

1926 High	1926 Low	1927 High	1927 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Oct. 8 Sales	First	High	Low	Last	Change
32⅞	24¼	37⅝	27⅝	(sh) 916,675	N.P.	Amerada Corp.	50cQ	July 30, 27	4,000	30¾	30⅞	29¾	30	— ⅝
74	39⅞	64⅞	35⅛	(sh) 209,180	N.P.	American Republics	.....	.....	10,300	47	49	45⅛	46¾	— 1⅝
59½	44¾	50¼	40	$ 56,000,000	$25	Associated Oil	50cQ	Sept. 24, 27	.....	.....	.....	.....	.....	.....
128⅜	97	131⅜	107	50,000,000	100	Atlantic Refining	$1Q	Sept. 15, 27	16,300	120½	120½	114¼	115⅜	— 4⅞
120	115½	118½	115½	20,000,000	100	do pfd	$1.75Q	Aug. 1, 27	100	118½	*118½	118½	118½	+ ½
33½	23½	35½	20¾	25,000,000	25	Barnsdall Corp. A	62½cQ	July 15, 27	25,900	22½	22⅞	†20¾	21	1¼
29½	22½	32½	20½	3,842,400	25	do B	62½cQ	July 15, 27	300	22⅛	22⅛	†20½	20½	— 1⅝
68⅛	29¾	32⅞	20½	51,523,950	25	California Petroleum	25cQ	Sept. 1, 27	12,400	21¾	21¾	†20½	21	— ¾
94¼	50	96¾	65	24,355,000	100	General Asphalt	.....	.....	14,300	76⅜	76⅞	73½	74½	— 1⅝
140½	94⅞	144⅛	107¼	6,874,200	100	do pfd	$1.25Q	Sept. 1, 27	500	117	118	115	118	— ¼
72	50¼	174½	60⅛	25,000,000	100	Houston Oil	.....	.....	203,200	163	175¾	159	167	+ 4⅜
84	19⅝	32¾	17⅝	(sh) 500,000	N.P.	Independent Oil & Gas	25cQ	July 18, 27	6,400	21½	21½	19½	19½	— 1⅜
13¾	7¼	11¾	7½	$ 3,280,340	$10	Indian Refining	.....	Dec. 15, 20	3,200	11⅛	11⅛	9¾	9¾	— ½
12½	8	11¾	7¼	4,550,110	10	do ctfs	.....	.....	2,600	10¼	10½	9⅛	9⅛	— ⅞
104	90	112	99⅞	2,296,400	100	do pfd	.....	Dec. 15, 21	100	109	109	109	109	— ⅞
24½	19⅛	34⅜	20½	(sh) 3,992,067	N.P.	Lago Oil & Transport	75cQ	Aug. 1, 27	13,800	32¾	33½	32	32½	— ⅜
19¼	12	18⅛	10½	(sh) 1,131,290	N.P.	Louisiana Oil Refining	.....	.....	7,700	10⅞	11⅛	10⅞	11	0
98	93	97	90	$ 4,000,000	$100	do pfd	$1⅜Q	Aug. 15, 27	250	91	92	90½	92	+ 1½
28⅞	16½	22¾	12	(sh) 330,000	N.P.	Maracaibo Oil	.....	.....	2,300	13⅜	13⅛	†12	12½	— ⅝
63⅜	49¼	58½	31	(sh) 2,316,401	N.P.	Marland Oil Co.	.....	Mar. 31, 27	23,700	35⅛	35¼	32½	32½	— 2¼
250	225	250	200	$ 45,942,800	$100	Mexican Petroleum	$3Q	July 20, 27	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	12,000,000	100	do pfd	$2Q	July 20, 27	.....	.....	.....	.....	.....	.....
13¾	6	9¼	3	(sh) 945,839	N.P.	Mexican Seaboard	.....	Nov. 15, 24	1,000	4¼	4⅜	4	4	— ¾
37	27½	39⅜	26⅝	(sh) 1,357,800	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 27	19,400	28¼	29	†26⅜	27	— 1⅜
104¼	90	105	97	$ 6,718,000	$100	do pfd	$1.75Q	Sept. 1, 27	.....	.....	.....	.....	.....	.....
2½	¾	3¾	1⅝	24,435,000	10	Middle States	.....	July 1, 23	6,700	2⅜	2½	2½	2⅛	— ¼
1⅞	½	2¾	1⅞	5,356,660	...	do ctfs	.....	.....	1,700	1⅞	1⅞	1¾	1¾	0
2¼	1	1⅞	1	(sh) 3,500,000	N.P.	Pacific Oil	.....	.....	2,400	1⅜	1¼	1⅛	1⅛	0
76½	56½	65⅞	45⅛	$ 48,807,500	$ 50	Pan American P. & T.	$1.50Q	July 20, 27	500	50¼	50¼	46⅛	47	— 2⅞
78⅜	56⅞	66⅜	45⅝	121,094,850	50	do B	$1.50Q	July 20, 27	27,500	51¼	51¼	48	48	— 3⅜
46	30	37⅞	16¾	(sh) 400,000	N.P.	Pan American Western B	.....	Jan. 30, 27	3,000	19	19	†16¾	16⅞	— 1¾
62	4½	18⅞	8	(sh) 198,770	N.P.	Panhandle P. & R.	.....	.....	1,400	12	12	9½	9½	— 2⅜
99⅜	51	83¾	58¾	$ 2,935,200	$100	do pfd	.....	July 2, 23	100	67	67	67	67	— 3
57⅜	40	60¼	36¼	(sh) 2,406,796	N.P.	Phillips Petroleum	75cQ	Oct. 1, 27	251,100	42¼	42¼	†36¼	36⅝	— 5⅝
1⅞	½	1⅞	½	$ 29,622,925	$ 25	Pierce Oil Corp.	.....	.....	700	⅝	⅝	½	½	— ⅛
27⅛	11⅜	24	13½	15,000,000	100	do pfd	.....	Feb. 1, 22	.....	.....	.....	.....	.....	.....
7	2¼	5½	2½	(sh) 2,500,000	N.P.	Pierce Petroleum	.....	.....	6,500	3¾	3⅞	3⅝	3¾	— ⅛
20¾	11	33⅞	16¾	$ 37,450,850	$50	Producers & Refiners	.....	Sept. 15, 23	19,900	30¼	30⅝	28	28	— 2½
41¾	30¾	50	36⅞	2,845,350	50	do pfd	.....	May 1, 25	150	43	44	42	44	— 1½
31	25¼	33½	25⅝	75,939,250	25	Pure Oil Co.	‡37½cQ	Sept. 1, 27	15,100	26⅝	26⅝	25⅞	26	— ½
112¾	106	114	111¾	13,000,000	100	do 8% pfd	$2Q	Oct. 1, 27	400	114	114	114	114	+ ½
57⅜	47⅜	58	45¼	(sh) 616,605	13.40	Royal Dutch, N. Y. shares	$1.80	Aug. 2, 27	3,200	46	46	45¼	45⅝	— ⅞
40⅝	40½	47⅞	41½	(sh) 78,389	F2	Shell Transport & T.	$1.45	July 22, 27	100	41½	41½	†41½	41½	— 1½
31	24	31¾	25	(sh) 10,000,000	N.P.	Shell Union Oil	35cQ	Sept. 30, 27	6,500	25⅝	25¾	25⅛	25⅛	— ¾
114	103	111	107½	$ 18,350,400	$100	do pfd	$1½Q	Aug. 15, 27	.....	.....	.....	.....	.....	.....
28⅝	15⅛	22¾	14¼	7,208,080	10	Simms Petroleum	.....	Apr. 1, 27	5,100	17	17	16½	16½	— ½
24⅞	16¾	22⅝	16	(sh) 4,501,339	N.P.	Sinclair Consolidated	.....	May 31, 24	21,300	16⅞	17	16¼	16¼	— ⅝
99½	90	103¼	97	$ 16,907,000	$100	do pfd	$2Q	Aug. 15, 27	100	100½	100¾	100½	100¾	+ ¾
37⅛	26⅝	37⅜	24⅛	27,396,590	25	Skelly Oil Co.	50cQ	Sept. 15, 27	13,400	26½	26½	24½	24⅝	+ 2⅛
63⅝	52⅝	60¾	50⅜	(sh) 13,016,434	N.P.	S. O. California	62½cQ	Sept. 15, 27	13,500	53½	53⅞	53	53	— ½
46⅜	37⅜	43¾	35⅛	$ 606,243,050	$25	S. O. New Jersey	‡25cQ	Sept. 15, 27	44,600	39⅞	40¼	38⅞	39	— 1
33¼	32½	34⅞	29¾	424,348,275	25	S. O. New York	40cQ	Sept. 15, 27	23,500	31⅝	31¾	30½	30⅝	— ⅞
41⅝	30⅛	34⅞	30	(sh) 1,171,508	N.P.	Sun Oil	25cQ	Sept. 15,27	3,000	32	32	31¼	31¼	— ¾
.....	.....	100⅝	99	$ 5,000,000	$100	do pfd	$1.50Q	Sept. 1, 27	200	100	*100¼	100	100⅛	+ ⅛
5¼	1	6½	3¾	(sh) 1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20, 20	13,000	4½	4½	3¾	3¾	— ¾
57⅞	53⅛	58	45	$ 180,428,225	25	The Texas Corp.	75cQ	Oct. 1, 27	17,000	51⅛	51⅜	49¾	49¾	— 1½
19½	12	18⅞	12	8,380,340	10	Texas Pacific Coal & Oil	15c	Sept. 30, 27	8,400	14½	14½	13¾	13¾	— ½
39¼	37	29⅛	22	(sh) 2,168,264	N.P.	Tide Water Oil Co.	20cQ	Sept. 30, 27	200	22½	22½	22½	22½	— ½
103	87¼	89¾	86	$ 20,705,200	$100	do 5% pfd	$1.25Q	Aug. 15, 27	600	89⅛	89¼	88	89	0
....	....	19⅞	15⅜	(sh) 4,795,934	N.P.	Tide Water Associated	15cQ	Aug. 1, 27	35,800	17	17⅛	†15⅜	15⅜	— 1⅜
....	....	90¾	85	$ 72,795,900	$100	do pfd.	$1.50Q	July 1, 27	2,600	86⅝	86⅝	†85	85½	— 1
5½	3	9¾	3¾	(sh) 3,742,029	N.P.	Transcontinental Oil	....	.....	43,900	7⅜	7⅜	6¾	6¾	— ½
58⅜	37¼	56½	39⅜	$ 40,759,475	$ 25	Union Oil of California	50cQ	Aug. 10, 72	9,400	42	42	41⅛	41⅛	— ⅝
120⅜	84¼	116½	94	30,734,000	100	Union Tank Car Co.	$1.25Q	Sept. 1, 27	200	110	110	110	110	— 2
....	....	28½	24½	(sh) 240,000	N.P.	Warner Quinlan	50cQ	Oct. 1, 27	500	25½	25⅞	25½	25½	— ⅜
29¾	25⅛	27½	22	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	July 20, 27	1,000	22¼	22¼	22	22	— ⅛

*New High †New Low xEx-Dividend ‡Also extras Total Sales 972,000

Hadlick Puts Out Marketers Guide

MINNEAPOLIS, Oct. 8.—Laws and regulations covering the oil industry of Minnesota are published in the "Minnesota Oil Marketers' Guide" which has just been compiled by the Minnesota Petroleum Association under the supervision of Paul E. Hadlick, secretary.

Besides giving the oil marketer a quick reference to laws of interest to his own business, the booklet includes statistics on gasoline and kerosene shipments into Minnesota during 1922 to 1926 inclusive by towns and companies; a table on tank car outages; a method for figuring temperature corrections on crude, gasoline and kerosene, and other similar information.

The booklet also carries advertisements of major refiners and marketers and oil equipment manufacturers.

Names of officers and directors of the association are included with the expiration date of the term of each director given.

PITTSBURGH STOCK EXCHANGE

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Oct. 7 Sales	First	High	Low	Last	Ch'ge
8½	5¾	9⅞	6⅞	$ 10	Arkansas Nat. Gas.	2,432	8	8⅛	7⅝	8⅛	+ ½
90½	79¾	98⅝	84	100	Columbia Gas.	30	92⅞	92⅞	92⅞	92⅞	+ ½
101⅜	95	107	100	100	do pfd.	.....	.....	.....	.....	.....	.....
17	12½	15	9½	10	Devonian Oil	.....	.....	.....	.....	.....	.....
116½	112	116¾	115	100	Duquesne Lt. 7% pfd.	.....	.....	.....	.....	.....	.....
10	5⅛	12¼	6	N.P.	Houston Gulf Gas.	200	10½	11	10½	11	+ 1
46	39	51	37¼	$ 25	Lone Star Gas.	9,635	48⅜	*51	48⅜	49	+ ¾
47⅜	33⅛	22¾	22¼	25	Ohio Fuel Corp.	.....	.....	.....	.....	.....	.....
47½	42	21⅝	21	...	do ctfs.	.....	.....	.....	.....	.....	.....
6¾	5	6	5	...	Ohio Oil & Gas.	.....	.....	.....	.....	.....	.....
34	21	21	21	25	Oklahoma Nat. Gas	.....	.....	.....	.....	.....	.....
21	19¼	23⅜	20¼	....	do ctfs.	1,340	22	22½	22	22⅛	+ ⅜
5⅜	3⅛	3⅞	3	5	Pittsburgh Oil & Gas	100	3¼	3¼	3¼	3¼	0
10	7½	8	6	10	Salt Creek Cons.	80	6¼	6¼	6	6	— ¼
27	8	26½	17	10	Tidal Osage	100	22	22	22	22	+ 1
45	40	43	33	N.P.	Waverly Oil Wks. "A"	10	33½	33½	33½	33½	+ ½

PITTSBURGH CURB EXCHANGE

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Oct. 7 Sales	First	High	Low	Last	Ch'ge
3⅜	2½	3½	2¾	$ 5	Columbia Synd.	.....	.....	.....	.....	.....	.....
20	.06	.18	.18	5	Duquesne Oil	.....	.....	.....	.....	.....	.....
91½	85	94	88	25	Gulf Oil Corp.	.....	.....	.....	.....	.....	.....
79	79	105	93	100	Houston Gulf Gas pfd	.....	.....	.....	.....	.....	.....
12	7½	10¾	6¼	N.P.	Leonard Oil & Dev.	.....	.....	.....	.....	.....	.....
30¼	29	32	31¼	$ 25	Oklahoma Gas.	.....	.....	.....	.....	.....	.....
2	.15	2.70	.75	10	Omar Oil & Gas.	2,100	.99	1.00	.99	1.00	+ .25
....	....	2¼	1¾	....	Pittsburgh Oil Dev.	.....	.....	.....	.....	.....	.....
2	1¾	2¼	2¼	5	do pfd.	.....	.....	.....	.....	.....	.....
33½	20	31	20	10	Plymouth Oil	.....	.....	.....	.....	.....	.....
7	3	6	5	5	States Oil	.....	.....	.....	.....	.....	.....
3½	2	3⅛	1⅝	1	Texon Oil & Land.	900	1¾	1¾	†1⅝	1⅝	— ⅛
25¾	8	23¾	18	10	Tidal Osage (non-vtg).	55	21	21	21	21	— 1½

*New high †New Low xEx-Dividend

Standard Oil Stock Traded in New York

1926 High	1926 Low	1927 High	1927 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Oct. 8 Sales	First	High	Low	Last	Change
21	16⅜	21⅜	17⅝	£ 4,000,000	£1	Anglo-American Oil	60⅓c	May 31, 27	1,800	18⅜	18¾	18⅜	18⅜	0
20¼	16½	20½	17⅝	.....	£1	do ctfs. non-voting	.....	.....	1,600	18⅜	18⅜	18⅛	18⅜	— ⅛
2¼	.75	1⅜	.75	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	.....	.....	.....	.....	.....	.....
5	2⅞	4½	2½	$ 000,000	$ 10	do pfd	.....	.....	.....	.....	.....	.....	.....	.....
75	65	69	50	1,000,000	25	Borne Scrymser	‡$1S.A.	Oct. 15, 27	50	58	58	58	58	+ 0
59½	42	59	45	10,000,000	50	Buckeye Pipe Line	$1Q	Sept. 15, 27	300	56½	56½	55½	56	— 1
82½	65	115	76½	3,000,000	25	Chesebrough Mfg	$1Q	Sept. 30, 27	1,400	107	115	107	113	+ 4¼
25⅞	17½	22⅝	16½	38,805,260	10	Continental Oil	25cQ	Sept. 15, 27	7,000	17¼	17⅜	16½	16½	— ¾
137	102	137	89	3,000,000	100	Cumberland Pipe Line	$2Q	Sept. 15, 27	.....	.....	.....	.....	.....	.....
63¾	43	61	47	5,000,000	100	Eureka Pipe Line	$1Q	Aug. 1, 27	350	61	*61	60¾	60¾	0
32½	9⅛	13½	7⅛	16,000,000	100	Galena Signal Oil	.....	June 30, 25	200	7¾	8	7¾	8	0
94½	35	59¾	32	4,000,000	100	do new pfd	.....	June 30, 26	20	32	32	†32	32	— 1
97½	40	60⅛	36	2,000,000	100	do old pfd	.....	June 30, 26	20	46½	46½	46½	46½	+ ½
99⅝	52	65¼	54	73,117,577	25	Humble Oil & Refining	‡30cQ	Oct. 1, 27	19,600	63½	64½	63	63	— ⅜
144½	125¼	164¾	123¾	20,000,000	100	Illinois Pipe Line	$6S.A.	June 15, 27	500	162¼	163¼	162	163¼	+ 1
39¾	32½	64¾	37¾	(sh) 6,491,952	N.P.	Imperial of Canada	‡25cQ	Sept. 1, 27	27,400	61½	62	57⅝	58½	— 1⅞
70	54¼	79	61	$ 5,000,000	$50	Indiana Pipe Line	$1Q	Aug. 15, 27	950	76	77¾	76	76½	— ½
35¼	28¾	34⅞	28	(sh) 7,118,138	N.P.	International Petroleum	25c	June 15, 27	24,900	33	33	31	31	— 1⅝
20¾	12½	17	13½	$ 6,362,500	$12½	National Transit Co	25cQ	Sept. 15, 27	2,200	16¼	16⅜	16	16⅜	— ⅛
51½	27⅛	37	31¼	5,000,000	100	New York Transit	.....	July 15, 26	100	34½	34½	34½	34½	— 1½
80½	64	91	70	4,000,000	100	Northern Pipe Line	$3S.A.	July 1, 27	150	83	83½	82½	83½	+ ½
67⅜	55¾	64¼	52	60,000,000	25	Ohio Oil Co	‡50cQ	Sept. 15, 27	900	60⅞	60⅞	59½	59½	— ¾
24¾	15	31	12	10,000,000	25	Penn Mex. Fuel	.....	May 21, 25	900	24½	24⅝	23	23	— 1½
60¼	48	55½	45⅜	60,000,000	25	Prairie Oil & Gas	50cQ	Aug. 31, 27	4,600	51½	51½	49	49½	— 2
137½	122¼	186	132	81,000,000	100	Prairie Pipe Line	$2.50Q	July 31, 27	1,750	181¾	182½	181	182½	+ 1
220	184½	201½	180	4,000,000	100	Solar Refining	$5S.A.	June 20, 27	70	182	182	181	181	0
27	21	27¼	15½	5,000,000	50	Southern Pipe Line	.....	Mar. 1, 26	400	21	21¾	21	21⅝	+ ⅝
50	34½	41½	34½	20,000,000	25	South Penn Oil	50cQ	Sept. 30, 27	900	37¾	37¾	37½	37½	— ¼
57	49	77	55½	3,500,000	100	South West Pa. Pipe Lines	$1Q	Oct. 1, 27	.....	.....	.....	.....	.....	.....
70½	60½	75⅞	64¾	228,415,463	25	S. O. Indiana	‡62½cQ	Sept. 15, 27	23,700	73⅜	73⅜	71	71	— 2¼
36½	16½	20⅞	15⅝	8,000,000	25	S. O. Kansas	.....	June 16, 24	200	17	17	16¾	16¾	— ¼
134¾	108	123¾	111½	17,012,599	25	S. O. Kentucky	$1Q	Sept. 30, 27	3,500	122	122	118	118¾	— 2¾
51⅛	42	49½	42	4,559,850	25	S. O. Nebraska	63cQ	Sept. 20, 27	1,000	44¼	44¼	43⅝	43⅝	— 1⅜
672	288	863¾	73	14,000,000	25	S. O. Ohio	62½cQ	Oct. 1, 27	415	78¾	78¾	78¾	77¾	0
120½	116½	122	117¼	7,000,000	100	do pfd	$1.75Q	Sept. 1, 27	20	118½	118½	118½	118½	— 1½
23	15½	18	14½	861,466	25	Swan Finch Co	.....	Nov. 1, 19	150	17½	17⅝	17½	17⅝	0
109¾	90¼	134⅝	95½	62,470,800	25	Vacuum Oil	‡50cQ	Sept. 20, 27	4,600	127	129⅞	126½	127½	— 1½

*New high †New low xEx dividend ‡Also extras.

New York Bonds

Week Ending October 7

	High	Low	Last	Ch'ge
Amer. Rep. deb. 6s	99½	99¼	99¼	— ½
Assoc. Oil gold 6s	103	102¾	103	0
Atlantic Refg. deb. 5s	102	101½	101½	0
Barnsdall Corp. 6s	98	97	97⅜	— ⅝
Barnsdall Corp. 6s ex war.	91	90	90	+1½
Cal. Pet. 5s	95¾	94¾	95⅜	+ ¾
Cal. Pet. 5½s	100¼	99¼	100	+ ¾
General Asphalt 6s	108	107	107	+ ½
General Petroleum 5s	101⅞	101½	101½	0
Humble Oil & Refg. 5½s	102¾	102½	102¾	+ ¼
Humble Oil 5s	100	99½	97⅞	0
Mid-Cont. Pet. 6½s	105	104½	105	+ ½
Pan Amer. P & T. 7s	105½	105¼	105½	+ ¼
Pan Amer. P & T 6s	102¾	102¼	102¼	— ⅛
Pan Amer. P & T 6s	94	92½	92½	—2
Pierce Oil deb. 8s	102	102	102	0
Prod. & Refiners 8s ex war.	111	111	111	+1
Simms Pet. cvr. 6s	100½	100	100¼	+ ¼
Sinclair Con Oil col 7s	100	99¾	99⅞	— ⅛
Sinclair Con Oil con 6½s	96⅜	94¾	94¾	—1⅜
Sinclair Con. Oil 6s	100	100	100	0
Sinclair Crude Oil 6s	100½	100¼	100¼	0
Sinclair Pipeline 5s	95	94	94½	+ ½
Skelly Oil 5½s	95⅜	95	95¼	0
S. O. of N. Y. 4½s	96⅛	95⅛	96⅛	+ ¼
S. O. of N. J. deb. 5s	103¾	103	103¾	0
Superior Oil 7s	103	103	103	+1¼
Union Oil of Cal 6s-A	109	108⅞	109	0
Union Oil of Cal. 5s-C	98½	98	98	— ½

New York Curb Bonds

Week Ending October 7

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	100⅞	100⅜	100⅜	— ½
Cities Serv. 5s '66	90⅜	90	90¼	0
Cities Serv. 6s '66	101¾	101⅛	101¾	+ ⅜
Cities Serv. G 5½s '42	93¾	93¼	93¾	+ ⅛
Galena S. O. 7s '30	93	92	92¼	— ¼
General Pet. 6s '28	100⅝	100⅜	100⅝	— ¼
Gulf Oil 5s '37	100¼	100	100¼	0
Indpen. Oil 6s '39	99	98½	99	— ½
Phillips Pet. 5½s '39	95⅝	94¾	94¾	—1
Pure Oil 6½s '33	103½	103⅛	103⅛	+ ⅜
Pure Oil 5½s '37	100	99½	99⅞	+ ¼
Richfield Oil 6s '41	93¼	93⅛	93¼	0
Sinclair Oil 6s '30	99⅛	98¾	99	0
S. O. N. Y. 6½s '33	104½	104⅜	104½	0
Sun Oil 3½s '39	101	100¼	100½	— ¼
Trans. Cont. Oil 7s '30	111	108½	108½	— ⅝
United Oil Prod. 8s '31	70¼	70¼	70¼	+ ⅛
Valvoline 7s '37	104¾	104¾	104¾	0
Warner Quinlan 6s '42	95	95	95	0
White Eagle 5½s '57	96¼	96	96¼	0

CEDAR RAPIDS, Ia.—Champlin Oil Co. has just taken over the Ginn Oil Co. here, giving the former company direct distribution in eastern Iowa.

New York Curb Market

1926 High	1926 Low	1927 High	1927 Low	Par Value	Stocks	Transactions Week Ended Oct. 8 Sales	First	High	Low	Last	Change
6¾	45	2⅞	.55	$5	Amer. Con. Oilfields	72,000	96	100	88	97	— 1
14½	4	7½	3	N.P.	Amer. Maracaibo	4,200	3⅜	3½	3¼	3¼	— ¼
8½	5⅜	9⅜	6¾	$10	Arkansas Nat. Gas	900	7⅝	8	7⅝	8	0
20⅜	14⅜	20½	15½	N.P.	Beacon Oil	.....	.....	.....	.....	.....	.....
85¼	60	33¾	20½	N.P.	British American	600	32	32	31½	32	— 1½
28⅜	9¼	28¼	14⅜	25c	Carib Syndicate(new)	5,200	21½	21⅝	19⅜	19¾	— 1⅞
...	...	26	16½	...	do ctfs. of deposit	.....	.....	.....	.....	.....	.....
51	37½	58¾	40¼	$20	Cities Service	17,300	49⅜	51¼	49½	51⅛	+ 1⅛
92½	82¾	93½	87	100	do pfd	5,100	91⅝	*93½	91⅝	93½	+ 1¾
8⅜	7⅜	8½	7⅜	10	do pfd. B	1,300	8¼	8⅜	8¼	8⅜	+ ⅛
25¼	19	29¼	22½	10	do banker's shares	.....	.....	.....	.....	.....	.....
3½	1¾	3⅛	1¾	$1	Colombia Syndicate	4,700	2⅛	2⅛	2	2⅛	0
10⅜	8⅛	9½	7	10	Consolidated Royal	.....	.....	.....	.....	.....	.....
16	10	14⅞	9⅞	N.P.	Creole Syndicate	19,700	10¾	10¾	10⅛	10¼	— ½
7⅜	1⅛	3	63	N.P.	Crown Central	600	75	75	†63	63	— ½
8½	½	12	4¾	...	Darby Petroleum	600	....	6	5¼	5¼	— 1⅛
...	....	11½	5⅜	...	do trust ctfs.	.....	.....	.....	.....	.....	.....
4	1¾	2½	1¼	N.P.	Derby Oil & Refining	.....	.....	.....	.....	.....	.....
19	13	16¾	10	N.P.	do pfd	.....	.....	.....	.....	.....	.....
7½	2½	3¾	1	N.P.	Gibson Oil	11,000	1⅞	2⅜	1¾	2¼	+ ¼
2	.63	1⅜	40	N.P.	Gilliland ctfs.	.....	.....	.....	.....	.....	.....
98	82	96½	86¼	$25	Gulf Oil Corp	3,200	92½	92¾	91½	92	— ½
3⅜	1	2¼	1¼	N.P.	Kirby Petroleum	400	1¼	1¼	1¼	1¼	— ⅛
12¼	5¾	10⅞	6	N.P.	Leonard Oil & Dev.	9,800	9	9	7¾	8¼	— ¾
27	20	27½	21⅛	N.P.	Lion Oil & Refg.	800	21½	21½	†21⅜	21½	— ¾
46	31	51	37	$25	Lone Star Gas	14,800	48½	*51	48½	49	+ ¼
2¾	2	2⅞	.87	1	Magdalena Synd.	10,800	100	100	91	100	0
5½	1⅞	3	1½	10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
1¾	1¼	1½	1	1	Mountain & Gulf	.....	.....	.....	.....	.....	.....
26	23	26⅛	22¾	10	Mountain Producers	3,800	23½	24	23½	24	+ ½
6¾	5	5⅞	4¾	5	New Bradford	800	4¾	4¾	4¾	4¾	0
11¾	2	6¼	4	10	New England Fuel	.....	.....	.....	.....	.....	.....
17	9⅛	16	9¼	1	New Mex. & Ariz.	1,400	10⅜	10⅜	10	10¼	— ⅛
17	8	13¼	9	25	New York Oil	300	11½	11½	11⅜	11½	— ¼
12⅛	8¾	12⅝	10	N.P.	North Cent. Texas	200	10	10	†10	10	0
44¾	33	....	....	$25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
33	28½	27½	21¼	...	Okla. Nat. Gas ctfs.	.....	.....	.....	.....	.....	.....
10⅛	5⅛	9⅜	1¾	N.P.	Pandem	1,200	2¾	3	2¾	2⅞	+ ¼
12¼	11¾	12⅜	7	N.P.	Pantapec Oil	2,000	7⅞	8¼	7½	7½	— ¾
2¾	.20	.37	.25	N.P.	Peer Oil Corp	.....	.....	.....	.....	.....	.....
22¾	12	13½	6¼	$10	Pennok Oil	.....	.....	.....	.....	.....	.....
38	14⅛	24⅜	14⅜	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
30¼	12	15⅛	2	N.P.	Reiter-Foster	2,600	5⅞	6⅛	5¾	5⅞	— ¼
27½	22	27½	15	$25	Richfield Oil	.....	.....	.....	.....	.....	.....
7½	4½	7	4½	N.P.	Ryan Consolidated	1,400	6⅜	6⅜	5¾	6	— ⅜
10	7½	8	6	$10	Salt Creek Cons.	1,100	6⅛	6⅛	6	6	— ¼
36	26⅞	32	27¼	10	Salt Creek Prod.	900	28¾	29	28	28⅞	+ ⅝
4⅜	1⅛	7	2⅛	5	Savoy Oil	.....	.....	.....	.....	.....	.....
27	7⅝	26½	17	10	Tidal Osage	8,100	21⅛	22⅜	21⅛	22	+ ¾
25¾	7⅝	23¾	15	10	do non-voting	6,000	20¼	21⅜	20¼	20½	— ¼
...	....	88	63½	100	Transcontinental pfd.	.....	.....	.....	.....	.....	.....
3	4¼	7⅜	4¼	5	Venezuelan Petrol	1,400	5¼	5¼	5	5	— ⅛
31⅛	22	32⅜	20⅜	N.P.	Wilcox Oil & Gas	500	21⅛	21⅞	21⅛	21⅞	+ ⅜
9½	4⅜	8	5⅛	$1	Woodley Petroleum	600	5⅛	5⅛	5⅛	5⅛	— ⅛

*New High †New Low xEx Dividend

THE OIL INDUSTRY EXCHANGE

Positions Wanted

C. A. Knight recently returned from Argentina where he was employed by the Bethlehem Steel Co., in the capacity of General Superintendent of Refinery, wishes to make connection with some Company as Superintendent or in an Engineering capacity. Address 924 North Lawrence, Wichita, Kansas.

SALES EXECUTIVE—31 years old, ten years sales, sales promotion and expansion experience now open for engagements. Five years experience marketing petroleum products and constructing and operating service stations. Available immediately—will go anywhere. Best of references. Address, Box 962.

Situations Open

GRADUATE CHEMIST

or chemical engineer—one who has had oil and refinery experience—to take charge of laboratory and do experimental work. Give some personal history of self, age and what salary will be considered—address Box 753, care National Petroleum News, Tulsa, Okla.

We have an opening for two more High Grade specialty salesmen to call on the Wholesale Oil Trade. Only men of proven ability and who know the trade will be considered.

The Air Scale Company,
Toledo, Ohio.

Business Opportunities

ROME E. GOODWIN, Broker

Trading in filling, bulk and marketing stations.

2313 Madison Ave., Room 23
Toledo, Ohio

Telephone Main 6963

A CO-OPERATIVE TULSA BUYING OFFICE

Your orders for petroleum products placed direct with responsible refiners
Small commission charge
Write or Wire for particulars

DALE W. MOORE

532-533 Mayo Bldg., Tulsa, Okla.
Telephones: 3-4177 and 3-4178
L. D. 136

EDWARD REISER

Broker in
OIL MARKETING PROPERTIES
Second & Walnut St., N.E.
CANTON *Tel. 29405* **OHIO**

Equipment Wanted

WANTED SMALL 2- OR 3-BARREL FIRE KETTLE without paddles, for grease compounding. Address Damascus Mfg. Corp., East 93rd Street and W. & L. E. R. R., Cleveland, Ohio.

For Sale

ONE CARLOAD CONTAINING (60 STEEL BARRELS) 300 VISCOSITY @ 212 TRANSMISSION GEAR OIL for sale. 13c per gallon F.O.B. Louisville. Stoll Oil Refining Company, Louisville, Ky.

Economy in Production

Do you realize how many hundreds of thousands of dollars are lost annually by accumulation of used engines, drilling equipment, etc., in refineries, warehouses or on leases?

Don't let your money be tied up in anything you don't need. Look over the equipment you are not using and write us about it. We'll sell it to some of our 15,000 readers.

Miscellaneous

PERSONAL

If HERBERT F. MILLER who was associated in 1913 with JOHN W. FLANAGAN in leasing certain lands in the district of Tuxpam, Vera Cruz, Mexico will communicate with the address given herein, he will learn something to his advantage. Information relative to FLANAGAN will also be appreciated. Address "Flanagan," care National Petroleum News, 342 Madison Ave., New York City.

Advertisers having box numbers should be addressed in care of National Petroleum News, 1213 W. 3rd St., Cleveland, Ohio, unless otherwise specified

WHAT IT COSTS

"For Sale," "Wanted to Buy," "Help Wanted," "Business Opportunities," "Miscellaneous" classifications, set in type this size without border—10 cents a word. Minimum charge, $3.00.

"Positions Wanted"—5 cents a word Minimum charge $1.00.

Advertisements set in special type or with border—$4.00 per column inch.

Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

Pipe Line Runs For August

HOUSTON, Oct. 10.—Magnolia Petroleum Company, pipeline department, announces from Dallas headquarters the following crude oil runs for August, which are shown in comparison with July:

	July	August
Hewitt-Graham	184,653.28	165,772.04
Healdton	212,678.72	224,725.50
Cushing	153,303.33	149,259.18
Yale	63,256.22	65,184.93
Cement	.....	.....
Duncan	54,712.92	57,785.16
Augusta	48,915.03	46,894.17
Walters-Beaver Creek	8,278.23	9,208.45
Burbank	84.73	89.93
Wewoka	808,638.40	940,406.89
Seminole	61,236.88	34,149.16
Total Okla.—Kans.	1,595,757.74	1,693,475.41
Archer	58,147.22	56,471.03
Burkburnett	78,439.29	83,351.47
Coleman	.....	.....
Comanche	20,674.08	20,528.29
Electra	108,035.57	110,440.28
Corsicana Heavy	8,983.50	9,905.80
Corsicana Light	16,227.76	16,748.51
Henrietta	3,811.73	4,417.04
Iatan	27,635.93	22,338.73
Luling	411,513.11	396,650.15
Lytton Springs	38,147.28	38,175.36
Mexia-Wortham	44,000.82	45,091.56
Mirando	88,658.27	85,822.59
Olden	13,072.18	12,192.52
Panhandle	196,885.03	160,830.96
Panola	1,687.57	1,158.56
Stephens	10,107.53	11,634.37
Thrall	1,224.40	1,375.50
Gulf Coast	6,061.70	9,614.46
Crane	44,338.00	.....
Total Texas	1,177,651.97	1,086,747.18
Haynesville	3,002.64	3,283.28
Bull Bayou	33,581.15	33,651.16
Cotton Valley	37,205.01	38,225.06
Pine Island	43,596.73	46,443.81
Total Louisiana	117,385.53	121,603.31
El Dorado Light	23,040.85	22,878.78
East El Dorado	1,633.40	.....
Smackover	127,935.78	116,719.98
Total Arkansas	152,610.03	139,598.76
GRAND TOTAL	3,043,405.27	3,041,424.66

OKLAHOMA - KANSAS

Report for August		Daily Average
Runs	1,990,209.00	64,200.00
Shipments	1,678,981.00	54,161.00
Total Stock	6,141,909.00	.....

TEXAS

Wichita, Wilbarger, Archer	Runs	253,062	8,163
	Shipments	248,183	8,006
Petrolia	Runs	4,417	142
	Shipments	4,417	142
Eastland, Stephens	Runs	44,355	1,430
	Shipments	.....	.....

TOTAL STOCK 257,695.00—North Central Texas Field.

Gasoline Research Report

Staff Special

TULSA, Oct. 10.—The Association of Natural Gasoline Manufacturers is publishing a book containing results of investigations of its research department. It will be off the press next week. The book will be more complete and be brought further to date than Engineering Research Bulletin No. 7 of the University of Michigan which was published last spring. Dr. George Granger Brown, professor of chemical engineering of the University of Michigan, is author of the new book on motor fuels. The volume will be sold for $1, plus postage. Orders may be sent to the association's offices in the Cosden building, Tulsa.

ADVERTISERS INDEX

National Petroleum News

Adamson Mfg. Co.
Air Scale Co.
Alcorn Combustion Co.
Allison Coupon Co.
Aluminum Company of America....Insert 4
American Can Co. 77
American Hoist Corp. 16
American Oil Pump & Tank Co. 51
American Radiator Co.
American Schaeffer & Budenberg Corp.
American Steel Package Co.
American Telephone and Telegraph Co. 31
Anderson-Prichard Oil Corp.
Associated Supply Co.

Badger & Sons Company, E. B.
Barnickel & Co., Wm. S. 99
Barnsdall Refineries, Inc.
Battenfeld Grease & Oil Co. 10
Bennett Pumps Corp.
Berg Industrial Alcohol Co., David 100
Bessemer Gas Engine Co. 95
Best Stamp & Mfg. Co.
Bethlehem Steel Co. 53
Biggs Boiler Works Co.
Blackmer Pump Co.
Blaw-Knox Co. 11
Boe Mfg. Co.
Bolene Refining Co.
Bowser & Co., Inc., S. F.
Braun & Co., C. F.
Brown Sheet Iron & Steel Co. 108
Buckeye Iron & Brass Works 2
Budd Wheel Co.
Buffalo Meter Co. 96
Butler Mfg. Co.
Byron Jackson Pump Mfg. Co.

Campbell, J. A. 59
Canfield Oil Co., Cleveland
Carbondale Machine Co.
Celite Products Co.
Central Commercial Co.
Champion Pneumatic Mach. Co.
Champlin Refining Co.
Chestnut & Smith Corp.
Chevrolet Motor Co.
Chicago Tubing & Braiding Co.
Chipman Chemical Engineering Co., Inc.
Cincinnati Advertising Products Co.
Clark Bros. Co. 72–73
Clark Co., Fred G.
Classified Advertising Section 119
Clear Vision Pump Co. 94
Continental Ref Co.
Continental Supply Co.
Crown Central Petroleum Corp.
Curtis Pneumatic Machinery Co.
Cushing Refg. & Gasoline Co. 76

Daugherty & Son Rfg. Co., W. H. 79
Davis Welding & Mfg.Co. Inside Back Cover
Dayton Air Compressors
Dayton Pump & Mfg. Co.
Dearborn Chemical Co. 108
Deepwater Oil Refineries
Diebold Safe and Lock Co.
Draper Mfg. Co.
Dunn Manufacturing Co. 40
Dunning Compressor Co.

Eaton, J. E.
Edwards Mfg. Co. 50
Elk Refining Co.
Emerson-Scheuring Tank Co.
Empire Oil Works, Inc. 60
Empire Oil & Refining Co. 14
Enameled Steel Sign Co.
Erie Meter Systems, Inc.
Ethyl Gasoline Corp. 87

Farrell Mfg. Co.
Federal Motor Truck Co.
Fisk Tire Co., The
Fiske Bros. Refg. Co. 96
Flexlume Corp.
Foamite-Childs Corp. 3
Foster-Wheeler Corp.
Foxboro Co., Inc. 45
Franklin Creek Refg. Co. 79
Freedom Oil Works 33

Frontier Mfg. Co.
Fry Equipment Corp.

Gasoline Register Co. 6
General American Tank Car Corp.
General Insulating & Mfg. Co.
General Woodwork Corp.
Gilbert & Barker Mfg. Co. 9
Globe Mfg. Co.
Globe Oil & Refg. Co. 66
Gomory, W. L.
Gousha Co. H. M.
Graham Brothers
Graver Corp.
Gray Processes Corp.
Gulf Ref. Co. 75
Gustafson Bros. Oil Co.

Hartol Products Corp.
Hayes Equipment Mfg. Co.
Heil Co., The
Heine Boiler Co. 61
Highland Body Mfg. Co. 70
Hope Engineering & Supply Co.
Hotel Gibson
Hughes Tool Co. 85
Hull Sign & Mfg. Co.
Humble Oil & Refining Co.
Huntley & Huntley 99

Illinois Glass Co.
Independent Oil & Gas Co.
Indiana Truck Corp.
Ingersoll-Rand Co.
Insulating Products Co.
International Derrick & Equip. Co.
International Harvester Co.
Irving-Iron Works Co.

Jenkins Bros. 50
Johns-Manville Corp.
Julian Pump Co.

Kanotex Ref. Co. 93
Keen & Woolf Oil Co.
Kellogg Co., M. W. 62-63
Kellogg Mfg. Co.
Kewanee Safe Co.
Klean-Rite Auto Laundry Co.

Larkin Automotive Parts Co.
Larkin-Thuro Corp.
Leach Co., C. H.
Leader Iron Works
Lewis-Shepard Co. 101
Lientz & Co., B. P.
Linde Air Products Co. 57
Lubricating Appliance Mfg. Co.
Luce Trunk Co. 103
Lummus Co., The Walter E.

Marion Machine, Foundry & Supply Co. 79
Marland Refg. Co.
Martin & Schwartz, Inc.
McCarron & Rosenbaum 99
McDonald Mfg. Co., A. Y. 78
McKee & Co., Arthur G.
Merco Nordstrom Valve Co. 82
Merit Oil Equipment Co.
Metal Hose & Tubing Co. 90–91
Metric Metal Works
Mid-Continent Petroleum Corp.
Milestone Meter Systems Inc.
Miller Sons Co. A. D.
Milwaukee Tank Works 92

National Carbon Co., Inc.
National Checking Co.
National Lead Co.
National Oil Products Co.
National Petroleum News 12–71
National Recording Pump Co. Inside Front Cover
National Refining Co. 103
National Transit Pump & Machine Co. 48
Neil & Co., Wm. 60
New York Lubricating Oil Co.
Niles Steel Products Co.
North American Car Corp.

Oakite Products, Inc. 56
Oil Conservation Engineering Co.
Oil Products Appliance Co.
Oil Well Supply Co. 39
Omar Refining Co.
Oxweld Acetylene Co.

Paasche Airbrush Co.
Patriot Mfg. Co.
Pennsylvania Flexible Metallic Tubing Co.
Pennsylvania Refg. Co.
Perfection Mfg. Co. 53
Petroleum Iron Works Co. 7
Pforzheimer & Co., Carl H.
Pittsburgh-Des Moines Steel Co.
Pittsburgh Machine Tool Co.
Platt Co., W. C. 110
Powerine Co., The
Pressed Steel Tank Co. 8
Prest-O-Lite Co.
Producers & Refiners Corp.
Professional Card Section 99
Pure Oil Co. Outside Back Cover
Pyrene Mfg. Co.

Quincy Compressor Co.

Reading Iron Co.
Reading Steel Castings Co., Inc. 55
Reid Gas Engine Co., Jos.
Reo Motor Car Co. 13
Rhodes Co., Jay B. 74
Roper Corp., Geo. D.
Roxana Petroleum Corp.

St. Louis Can Co.
St. Louis Pump & Equip. Co.
St. Louis Surfacer & Paint Co.
Sargent Engineering Corp.
Selden Truck Corp.
Service Station Equip. Co.
Shaffer Tool Works
Sharpsville Boiler Works Co.
Shaw, S. F. 99
Shotwell Pump & Tank Co.,
Sinclair Refining Co. 104
Sistersville Tank & Boiler Works
Skelly Oil Co. 106
Smith Corp., A. O. 81
Smith Separator Co.
Sonneborn Sons, Inc., L. 79
Southwestern Engineering Corp.
Spears & Riddle Co.
Standard Boiler & Plate Iron Works
Standard Garment Co. 100
Standard Lift Co.
Standard Liquid Testing Devices, Inc.
Steel Drum Accessories Corp. 75
Steinke Brothers Mfg. Co., Inc.
Stevens Grease & Oil Co., A. J.
Suender, W. Frederick
Sun Oil Company

Tagliabue Mfg. Co., C. J.
Taylor Instrument Companies
Texas Company, The 97
Texas Pacific Coal & Oil Co. 5
Tidal Refining Co. 88
Tokheim Oil Tank & Pump Co. 69
Transcontinental Oil Co.
Truscon Steel Co. 1
Tuthill Pump Co.

Union Metal Mfg. Co.
United Filters Corp. 59
U. S. Air Compressor Co.
United States Cast Iron Pipe & Foundry Co.
Universal Oil Products Co. 47

Vacuum Oil Co.
Viking Pump Co. 15
Vilter Mfg. Co.
Vogt Machine Co., Henry 52

Wackman Welded Ware Co.
Wadhams Oil Co.
Walworth Co.
Warren Refining & Chemical Co. 77
Waukesha Motor Co.
Wayne Co.
Westcott & Greis, Inc.
West Coast Lumber Bureau 102
Wheaton Brass Works, A. W. 29
Wheeling Steel Corp.
Widdell Engineering Co., Inc.
Williams Sealing Corp.
Willock Oil Corp.
Wilson Welder & Metals Co. Inc.

Youngstown Welding Co., The